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Summary.

The subjoined paragraphs give the gist of the more important matters in this issue, with the object of showing at a glance what has happened during the week. See also "Contents" in the first column.

AN impression of the Photographic Salon is given on p. 429.

A DENTAL EXHIBITION is being held at the Hotel Cecil, London. It is noted on p. 408.

MR. OSWALD A. READE, the senior naval dispenser, has retired from the service (p. 414).

AN OUTLINE of the Regulations dealing with the inspection of pharmacies in France is given on p. 410.

WE REVIEW the effect of some of the taxation changes which were introduced in the last Budget (p. 422).

SOME prosecutions under the Trade-marks Act for selling spurious Beecham's pills are reported on p. 426.

SOME INTERESTING ITEMS are contained in a recently published return of Civil List pensions (p. 423).

A RECAPITULATION of the arrangements at Aberdeen for the British Pharmaceutical Conference is given on p. 428.

THE POISONS AND PHARMACY BILL has been discussed before Chemists' Associations at Aberdeen and Dover (p. 428).

STATISTICAL INFORMATION regarding the Bengal Government cinchona plantation and factory will be found on p. 429.

A GUIDE to the all-day excursion to Braemar, which the British Pharmaceutical Conference will make next week is printed on p. 417.

MR. ARTHUR DECK, ex-Alderman of Cambridge, Mr. Robert Jamie, and Mr. W. J. Bently, fathers of pharmacy, have died during the week (p. 427).

THE EXERCISES in pharmaceutical arithmetic which have been given in the Students' Corner for the past few weeks are nearing conclusion (p. 406).

MAJOR COOPER-KEY makes some suggestions as to the storage of potassium chlorate *à propos* of an explosion that occurred at Manchester in June (p. 423).

A DENTISTS BILL that has been read in the Victorian Legislative Council proposes to make it illegal for unregistered persons to extract teeth (p. 411).

SIR JAMES CRICHTON-BROWNE is very severe on flies, and devotes much of his address before the Sanitary Inspectors' Association to the subject (p. 408).

TWO PARTNERS in the house of E. Merck, of Darmstadt, celebrated, on September 1, the twenty-fifth anniversary of their admission into the firm (p. 415).

THE CAPE COLONY now has a medicine-stamp duty and income-tax, those measures—contained in the Budget proposals—having been passed by the Government (p. 422).

THE CONTRACTION of import and export trade still continues, the August figures, which are analysed on p. 421, being disastrous when compared with the bumper month of last year.

AT THE CONFECTIONERS' EXHIBITION the feature is a section wherein are exhibited the products of the Netherlands. A well-written booklet is being distributed regarding Dutch colonial produce (p. 424).

"XRAYSER" makes some interesting comments on Mr. Francis Darwin's presidential address before the British Association, and waxes sarcastic at Professor Kipping's address on the well-worn subject of the decadence of British chemical industry (pp. 419 and 418).

THE NEW FRENCH CODEX is official in France next Tuesday. We give some historical notes on the work and indicate some of the changes that have been made on p. 420. Continuing the review of the Codex which was begun last week, we deal with the characters and tests given for essential oils (p. 413).

IN ADDRESSING THE CANDIDATES at the examination of the Spectaclemakers' Company in Glasgow the Master stated that he hoped before the end of his year of office to secure a permanent home for the guild and establish a reference library for opticians. We print the examination-papers on p. 425.

BUSINESS in drugs and chemicals is improving, but changes in value are few. They include higher prices for Cape aloes, buchu, cascara, Jamaica honey, and Tinnevelly senna. Madagascar beeswax, shellac, areca, chamomiles, bergamot, French lavender, lemon, and peach-kernel oils are all easier or lower (p. 430).

B

Corner for Students.

Conducted by Leonard Dobbin, Ph.D.

SUMMER STUDIES.

Pharmaceutical Arithmetic.

By Walter S. Clark, Ph.C., A.C.G.I.

Answers to Exercises C.

1. Percentage by volume = 68.7; percentage by weight = 62.44; specific gravity = 0.8733.

2. (*a*) 152.8 grains.
(*b*) One gallon must be evaporated down to 54 fl. oz.

3. 6.419 grains.

4. 0.903.

5. Each litre contains 6.065 grams of real HBr and 3.212 grams of real H_2SO_4.

6. 12.5 per cent.

7.

Methyl. salicylatis	419.5 minims
Ceræ albæ	108 grains
Menthol.	270 grains
Adipis lanæ	72 grains

8. 2.434 per cent.

9. 403 parts of weaker to 597 parts of stronger opium.

10. (*a*) Take $33\frac{1}{3}$ c.c. of the strong alcohol and dilute up to 100 c.c.
(*b*) Take 2.011 fl. oz. and dilute up to 5 fl. oz.

To Correspondents.

The majority of the replies received to Exercises C contained the following error in No. 6:

In the B.P. process only 10 grams of the 14 grams of opium taken are used for the estimation of the morphine. Hence, in this example, the percentage of morphine should have been calculated on ($\frac{10}{14} \times 5.566$) grams of opium, and not on the total 5.566 grams. Also since the loss during the B.P. process is 0.104 gram for 14 grams of opium, it is $\left(\frac{0.104}{14} \times 5.566\right)$ grams for the quantity here taken.

Other errors are as follows:

(2) The specific gravity of liquor acidi chromici was neglected.

(4) The misprint in the question was not detected, and hence the question was incorrectly answered.

(7) The volume of 450 grains of methyl salicylate was incorrectly found. It is $\left(\frac{450 \times 480}{437.5 \times 1.18}\right)$ minims.

(8) The percentage of ethyl nitrite should have been calculated from the equation, and not from the B.P. limits.

H. Jephcott.—(1) You have omitted to find the specific gravity. (6) See above. I fail to see how there can be the same loss if proportionate quantities of materials are used. Your name was spelled with a "S" instead of a "J" last week.

J. Puddepha.—(1) Simplify $\frac{114.4}{131.0}$ again. (2) Error in placing decimal point. (6 and 7) See above.

H. Brindle.—(6) See above.

W. O. F. Sinclair.—(5) Error in simplification. (6) General mistake above.

L. J. Sharp.—(2 and 6) See above.

Agricola.—Your answer to No. 2B is correct. It differs from the answer published because you have taken different values for the specific gravity of the oils. (2) Your answer to Part II. only gives the extent to which 100 c.c. have to be evaporated. (5) Error in decimal point. (4) You read the question correctly, but your method is wrong. Consult a text-book.

Phenol Phthalein.—(2, 4, and 6) General mistakes above. (5) In calculating the amount of H_2SO_4 you have neglected the fact that only 20 c.c. were titrated.

J. W. Ford.—(4, 6, and 8) See above. (10) How can grains ÷ specific gravity give the volume in cubic centimetres?

R. Cocking.—You have done very well with the questions attempted.

A. A. Cruickshank.—(2, 6, and 7) General mistakes noted above. (4) You should have tried to detect and prove the error. (8) You neglected to reduce volume of gas to N.T.P.

F. Brindle.—(1) Your error is due to the fact that 100 fl. oz. and not 100 oz. by weight are used. (4 and 6) See above. (8) Correct method. Where did you get the statement that 23.55 c.c. of NO weigh 0.03 gram at N.T.P.? (7) The constituents of your ointment amount to 8,000 grains, and yet you say "Adipem lanæ *ad* 900 grains."

G. F. Jarvis.—(2 and 6) See above. (7) Simplify $\frac{900 \times 12}{100}$ again.

N. Riddle.—(2, 6, and 8) See above. (5) When H_2SO_4 is *neutralised* by NaOH, Na_2SO_4 and not $NaHSO_4$ is formed. (10) You have mistaken the alcohol to which the specific gravity 0.9577 refers.

C. G. Ostler.—(1) 100 fl. oz. of S.V.R. weigh 83.4 avoirdupois ounces. Hence your mistake.

T. Sisteeton.—(6 and 7) See above. (2) Error in calculation. (10) See reply to N. Riddle.

W. H. Cockton.—(1) S.V.R. contains 90 per cent. by volume of real alcohol. (2) Error in simplification. (7) See above. (10) The specific gravity of the dilute spirit is given you—why find it?

J. G. Murray.—(1 and 10) There are 85.65 oz. by weight of real alcohol in 100 oz. by *weight* of S.V.R., and not by volume. (4 and 6) See above. (8) Error in reducing gas to N.T.P.

Ferrum.—(2 and 6) See above. (10) Read reply to N. Riddle.

S. H. Stroud.—(3) Error in placing decimal point. (8) The pressure and temperature must not be ignored in exact work. (5) 15.1, and not 5.1, c.c. of NaOH are neutralised by the HBr.

J. Thomas.—(1) See reply to J. G. Murray.

J. Small.—(3 and 8) Errors in simplification. (4) Your presumption is correct—error in calculation. (9) The algebraic proof is too long for insertion here.

A. J. Croft.—(1) See reply to J. G. Murray and in (7) to T. Sisterton. (2) See above. (3) Weight of 4 fl. oz. of the oil is 3.668 by 437.5 and not 480 in grains.

A. McG. Garden.—(1) Read note to J. G. Murray and in (7) to T. Sisterton. (2, 4, and 8) See above. (3) Error in simplification.

J. B. Mackay.—(2, 6, and 8) General mistakes above. (10) 1.67 oz. (your answer) by *weight* measure 2.01 fl. oz.

J. Meredith.—(2, 4, 7, and 8) See above. (1) Reply to W. H. Cockton.

A. A. Martut.—(4) You detected error, but your reasoning is wrong. (6) See above. (5) Error in placing decimal point.

Beginner.—(2 and 10) Errors in calculation. (6, 7, and 8) See above.

Arthur W. P.—Thanks for your note. Your statement is certainly preferable to that published. As you note, 1 litre of liquor ammoniæ weighs 959 grams, and not 0.959 gram as printed.

Exercises C concluded the series. The result of the competition will be published next week.

New Books.

These notes do not necessarily exclude subsequent reviews of the works. Any of these books printed in Great Britain can be supplied, at the published price, to readers of this journal on application (with remittance) to the Publisher of "The Chemist and Druggist," 42 Cannon Street, London, E.C.

Clery, A. E., and McWalter, J. C. *The Public Health Acts Amendment Act*, 1907, *with Explanation, Full Commentary upon the Sections and Summary of Recent Public Health Decisions*. $7\frac{1}{8} \times 4\frac{3}{4}$. Pp. 385. 2*s*. (Ponsonby, 116 Grafton Street, Dublin.) [This is a complete analysis of the above Act, and is arranged on a plan that makes it easy to follow. A complete index makes the contents easily accessible, and constitutes the work a good one for reference to those chemists who serve in public capacities. Dr. McWalter has specialised in public health, and is also a barrister-at-law, so that he makes an ideal collaborator to Mr. Clery, who is a bachelor of law.]

Jellett, H. *A Short Practice of Midwifery for Nurses*. 3rd edit. $7\frac{1}{2} \times 4\frac{3}{4}$. Pp. 480. 6*s*. 6*d*. net. (Churchill.)

Freeman, W. Marshall. *The Companies Act*, 1907. Reprinted from the "Associated Accountants' Journal." $8\frac{1}{2} \times 5\frac{1}{2}$. Pp. 20. 6*d*. (Cornish Bros., Birmingham.) [The substance of a lecture which Mr. Freeman delivered to the Associated Society of Accountants in Birmingham in the early part of this year. The pamphlet is readable and instructive.]

Haworth's Practical Timber Measurer and Architects' and Builders' Tables. $6\frac{1}{4} \times 3\frac{7}{8}$. Pp. 100. Limp cloth covers, 1*s*. 6*d*. ("Timber News" and "Master Builder," 84 Leadenhall Street, London, E.C.) [Contains a large number of useful tables such as are employed by everybody who has anything to do with wood commercially. The book also includes metric-conversion tables, money equivalents, wages tables, and weights of iron bars and lead pipes.]

Poynting, J. H., and Thomson, J. J. *A Text-book of Physics: Heat*. 3rd ed. $9 \times 6\frac{1}{8}$. Pp. 354. 15*s*. (Griffin, Exeter Street, Strand, London, W.C.)

Pulbrook, A. *The Handy Book on the Law and Practice of Joint-stock Companies*. 5th edit. $7\frac{1}{2} \times 4\frac{3}{4}$. Pp. 372. 4*s*. net. (E. Wilson.)

English News.

Local Newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Brevities.

A young man named Puttick was badly burned at Slaughton, Suffolk, by the explosion of a drum of carbon bisulphide, which slipped from a hoist.

The Horticultural Society organised in connection with Messrs. Ferris & Co., Ltd., Bristol, had a successful floral exhibition last week, there being a large number of entries.

Communications for Drs. Buchanan, MacFadden, and Hamill, of the Foods' Department, should be addressed to the new offices of the Local Government Board in Whitehall.

Persons having claims against the estate of the late Mr. R. Holttum, chemist and druggist, 84 High Street, Portsmouth, are requested to send them in this month to Mr. J. E. Pink, solicitor, Portsmouth.

A man named Albert Walter Counter, who was charged at Westminster Police Court on September 3 with obtaining a dinner by fraud, was stated to be addicted to the cocaine habit. The Magistrate remarking on the shocking state of the man, remanded him.

The Registrar of the Institute of Chemistry asks us to warn chemists and others against a tall seedy-looking man, who, on the plea of ill-health, solicits pecuniary assistance by impersonating a certain Fellow of the Institute of Chemistry in practice at Warrington.

Some time ago the Austrian Government presented a large quantity of residues from the radium mines to the Royal Society. These are now being worked up for Professor Rutherford in the laboratories of Messrs. Thomas Tyrer & Co., Ltd., Sterling Chemical Works, Stratford, E.

Mr. G. E. Dewhurst, chemist and druggist, and Mr. Colin Aldrich, chemist and druggist, will close their establishments at Brightlingsea (Essex) as follows: October 1 to February 28—Monday, Tuesday, and Wednesday, 7 P.M.; Thursday, 1 P.M.; Friday, 9 P.M.; Saturday, 10 P.M. March 1 to September 30—Monday, Tuesday, and Wednesday, 8 P.M.; Thursday, 1 P.M.; Friday, 9 P.M.; Saturday, 10 P.M.

The report to the Board of Education by the Consulting Committee on the School Attendance of Children below five states that it is a common practice to drug children under three in order to keep them quiet. In certain districts, witnesses assured the committee, children were dosed morning and night with medicines containing opium, while gin, soothing-syrup, laudanum, and opium pills were often administered.

A meeting of the West Ham Chemists' Association will be held at Earlham Hall, Forest Gate, London, E., on September 17, when Dr. Lauzun-Brown will deliver a lecture on "The Pharmacy of Animal Substances." The meeting which begins at eight, promises to be exceptionally interesting, and the hon. secretary informs us that he would be glad to see any chemist who can make it convenient to attend.

Mr. John Alfred Foster, F.I.C., was ordered to pay the Court costs and solicitor's fee at the Hull Police Court on September 4 for having falsely represented himself to be a captain in the reserve of the Royal Engineers. The defendant said he had resigned his commission as he had to devote his whole time to his duties as chemist at the Admiralty, and his solicitor said while the case was pending his client had withdrawn from the position of temporary public analyst for Hull in succession to the late Mr. Baynes, thereby incurring a loss of 120*l.*

Government Researches.

In addition to the grants already announced in aid of researches into the causes and processes of disease, the President of the Local Government Board has arranged for the making of the following additional researches:

1. A chemical and bacteriological investigation by Mr. C. G. Moor, M.A., F.I.C., and Dr. Hewlett, Professor of Pathology at King's College, London, as to the influence of softening and of other chemical processes on the purity of water supplies from the chalk as shown in actual experience and under experimental conditions.

2. An investigation by Professor Sidney Martin, F.R.S., into the powers of production of disease possessed by certain streptococci and by the poisonous substances produced by them, in continuance of previous investigations by him on the same subject.

New Pathological Department at ' arts'.

There is reason for believing that the new pathological department at St. Bartholomew's Hospital, the construction of which is now nearing completion, will be opened at the end of the year by the Prince of Wales, who holds the position of President of the institution, as did the King before him. The cost of the new premises, which adjoin the School of Medicine, has been about 30,000*l.*, and this latest addition to the hospital buildings is only part of the extensive scheme of rebuilding which was decided upon by the Governors some years ago, and rendered possible by the opportunity of acquiring some of the vacant ground whereon Christ's Hospital stood.

British Optical Assoeiation.

The British Optical Association has decided to hold an examination in the Fellowship grades in November next in London, in addition to the usual Dioptric examination. It is now permissible, at the examinations in both grades, to sit for the practical portion first and for the theoretical portion at a subsequent examination. Particulars can be had from Mr. J. H. Sutcliffe, Secretary, 199 Piccadilly, London, W.

Contraets.

Strood (Kent) Board of Guardians.—The Sanitas Co., Locksley Street, Limehouse, E., carbolic soap and disinfecting-fluid.

Nelson Town Council.—For the supply of 25,000 gals. of American gas-oil for use in the carburetted-water gas-plant.—Messrs. Meade, King, Robinson & Co., Manchester.

Holborn Board of Guardians.—Robb's nursery biscuits, Plasmon cocoa, mustard, baking-powder—Messrs. Edgar; Nestlé's infants' food, Nestlé's milk—Messrs. Cox; mineral waters—Messrs. Stansfeld & Co. (Fulham) (syphons soda 1*s.* 3*d.* per doz.; syphons lemonade 1*s.* 6*d.* per doz.); and soap—Messrs. Cox & Sons.

At the meeting of the Blackburn Guardians on September 5 a communication from Messrs. C. A. Critchley & Co., chemists, 10 King William Street, Blackburn, was received with regard to the surgical dressings recently supplied and rejected. The Guardians decided to accept the absorbent cotton-wool, but adhered to their previous decision in the case of the boracic-wool and the wood-wool wadding.

Analysts' Reports.

The Bristol City Analyst states that ten samples of drugs submitted last quarter were all up to the B.P. standards.

Mr. Edward Hinks, B.Sc., F.I.C., has been appointed by the Reigate Town Council as public analyst, at a fee of 10*s.* 6*d.* per sample.

At Wimbledon none of the following test-samples examined during the year was adulterated: Pepper 9, vinegar 7, tartaric acid 6, mustard 3, Epsom salts 3, cream of tartar 3. All three samples of cream of tartar and one sample of mustard were inferior.

The Rochdale public analyst (Mr. T. Senhouse) stated that out of fifteen samples of water obtained in the early morning from houses having lead-service pipes, thirteen contained from less than one-tenth to fully a quarter of a grain of lead per gal. The householders are advised to continue running to waste the water standing over-night in the pipes.

The report of the Sheffield analyst (Mr. G. E. Scott-Smith, F.I.C.) for the June quarter shows that 197 samples were received and analysed during that period. These included samples of pepper (3), mustard (1), vinegar (1), compound liquorice-powder (10), and camphorated oil (12), all of which proved to be genuine. Of seven samples of sweet spirit of nitre only one sample proved to be of inferior quality.

Sheffield Notes.

The city hospitals are full to overflowing, and the appeals for increased funds, urgently needed, have provoked a

recurrence of the perennial question of paying patients, which seems to be slowly gaining ground.

The Licensing Bill still provides copy for the correspondence column of the local Press. One voluminous contributor to the discussion, a local brewer, pressed pharmacy into service, with disparaging comparisons, in the "Sheffield Telegraph" of September 4.

The British Association, which accepted on September 5 the invitation of the Lord Mayor to visit Sheffield in 1910, will not hold its first local conference; the Association met here in 1879, when Dr. Allman was the President. When next the *savants* come to Sheffield those who can recall the visit of thirty years ago will find a vast difference in the accommodation at their disposal for the sectional meetings, probably for the first time, will in all likelihood be housed in one building—the spacious suites of the University.

A meeting of the Sheffield Pharmacy Athletic Club was held on the premises of the President (Mr. Percy Carr), Ecclesall Road, on September 4. A large number of enthusiastic members attended, and it was decided on discussion to at once take steps to form a football section for the coming winter season. The following officers were elected—viz., President, Mr. Percy Carr; Captain, Mr. Knowles; Sub-Captain, Mr. Pratt; Hon. Secretary, Mr. F. R. Clarke, 87 Ecclesall Road,; Linesmen, Messrs. J. Chadwick, J. T. Appleton, and P. Carr; Treasurer, Mr. J. T. Appleton; Referee, Mr. Campbell. With a strong and promising muster of players it is hoped to redeem the athletic reputation of the Club, which has suffered somewhat during the past cricket season.

Liverpool Notes.

Owing no doubt to the fall in temperature of the last fortnight, local chemists are experiencing quite a run on preparations not usually in demand before October.

The local Association is giving signs of activity for the coming session, the Secretary being on the look-out for "volunteers" anxious to fill up his vacant dates.

Quite a number of local members of the craft have made their arrangements for a week's jaunt to Aberdeen for the Conference. Others there are unable to go on account of the dearth of suitable locums. Opinions seem pretty unanimous that the man who a short time back laid himself out to act as locum, and did so satisfactorily, is the very man most sought after by the "Limiteds," and consequently lost to the trade.

Midland Notes.

The new Patents Act is causing the addition of a 20,000*l.* building at Coventry, where work just now is not good.

A local M.D., in the weekly Press, says that for insect stings and bites there is nothing better than liq. carbonis detergentis 5j., aquam ad 3x.; m. ft. lin.

A Burton-on-Trent medical man, Dr. Docherty, claims, according to the "Birmingham Post," to have made synthetic rubber, the only objection being that the product has a somewhat offensive smell. The formula is given as $(C_8H_{11}O)n$.

The school-children of Birmingham are to be medically examined by a superintendent and three other doctors—one a lady. Spectacles and medicine are to be provided when necessary. It is to be hoped that the local Association will watch the chemist's interests and get the contract for dispensing, as is done in the case of the police force.

Messrs. W. & J. George, Ltd., chemical-apparatus manufacturers, experienced a disastrous fire at their Great Charles Street premises last December, and on September 4 another severe outbreak occurred at the top of their four-storey works in Cambridge Street, the roof falling in before the flames were subdued after an hour's work.

The objection to the ownership vote of Mr. B. W. Willis, chemist and druggist, 11 Fairfield, Kidderminster, was an interesting point argued at the Worcester Revision Court on September 8. It was stated that Mr. Willis was a lodger in the house he owned, and was entitled to a lodger's vote for the borough and not an owner's vote for the county. Eventually it was stated that Mr. Willis wrote saying he stayed in the house by his sister's courtesy, and was not a lodger. The Revising Barrister said that disposed of the objection and the vote was allowed.

Fighting Flies.

Sir James Crichton-Browne, as President of the Sanitary Inspectors' Association, which has held its sessions in Liverpool this week, devoted much of his address to the subject of house-flies. It is not a new matter with Sir James, but he treated it with the full force of the trenchant criticism with which he is so well endowed. Here are a few of the paragraphs:

> The fly is a danger signal. Wherever flies congregated there must be dirt about. Even if the fly should be proved to be grossly maligned, the removal of that dirt must be advantageous. The practical proceedings which a study of the fly's life-history suggests are the removal of all horse-manure and similar products as speedily as possible, and certainly within eight days, the time occupied by the development of the fly, the substitution of water carriage for the older methods where that is practicable, the frequent clearance and cleansing of streets and courts, the employment of destructors of sufficient capacity to deal with house-refuse as it is collected, the reconstitution of the domestic larder, which should be made flyproof, and kept as scrupulously clean as the operating theatre of a hospital. There will be, perhaps, refrigerating larders one of these days. No doubt the fight with the fly will be a stiff one. One fly, it has been calculated, could lay 1,000 eggs, and might, on the snowball principle, have 25,000,000 descendants in a season. It is only by systematic attacks on the breeding-places that man can hope to rout this multitudinous disease-carrier.

The problem is sufficiently herculean to cause no apprehension that the business of fly-paper making is in danger of extinction during this generation.

Shewing their Teeth.

There is nothing forbidding in the display at the Hôtel Cecil, London, this week at the International Dental Exhibition. On the contrary, it is a bright, cheerful, and rather luxurious affair. There are thousands of teeth (artificial) in view, and all the requisites of the tooth-puller and the tooth-maker besides. The exhibitors are not numerous, but their exhibits are impressive. One of the most interesting displays is that of the Western Dental Manufacturing Co. in the Grand Hall. Besides various ingenious appliances invented by Mr. Osborn—such as the Osborn combined soldering-flame and Bunsen-burner, the Osborn anatomical articulator, and the Osborn patent suction disc—there are various pharmaceutical preparations produced by the company's own chemist. These include Eudox (an obtunder of sensitive dentine), Anæzol, a local anæsthetic), Thymoborm (for abscesses), Augaphen (for pulp-capping), Thymo-Perca (for root-filling), and Septicylat (for dressing putrid roots). Near by Thos. Christy & Co. have an effective display of Glyco-Thymoline, and the free samples are being eagerly snapped up. Ascher's artificial dental enamel and Schneider's nickel alloy are exhibited by Schneider & Co., Ltd., whose representative is a brother-chip, he being the son of Mr. Francis, chemist and dentist, of Portsmouth. The whole of the Crush-room, off the Grand Hall, is filled with a combined display under the ægis of the Dental Manufacturing Co., Ltd. There one finds adrenalin chloride in capsules as introduced into dentistry by Dr. Creemer Cooper, who is not unknown to West-end pharmacy, and whose father is a popular ex-Councillor of the Pharmaceutical Society. There also are Parke, Davis & Co.'s pharmaceutical preparations and appliances of interest to the dental profession, including the popular Euthymol series, Alkathymol, Euformol, Capsolin, and the well-known local anæsthetics, Eudrenine and Codrenine. P., D. & Co.'s "Dental Manual" will prove useful to chemist-dentists. In the same room are to be seen aseptic dental napkins, floss silk, absorbent cotton-rolls, and other products of Johnson & Johnson, as well as the John Wessler tooth-brushes, for which Messrs. G. B. Kent & Sons, Ltd., are the sole agents. The local anæsthetics are numerous. Besides those mentioned there are Novocain and Suprarenin (exhibited by the Saccharin Corporation, Ltd.), "Steriloid," "Yangko," and "Mylocal." Dr. Graft's "Reggecide" is a medicated tooth-powder shown by Elliott & Co. The Exhibition will be open until September 11, and is well worthy of a visit from chemists—and there are not a few—who are interested in dentistry.

Charges of Theft.

Two men were sent for trial from Marlborough Street Police Court on September 7 on a charge of extracting 2*l.* worth of false teeth from the premises of Mr. Stanley Redpath, a chemist, in Wardour Street, London, W.

Ernest Robert Gleeson, *alias* Ernest Gleeson and Charles Blake, was committed for trial at Bournemouth last week for stealing 15*s.* worth of perfumery, the property of Mr. Edwin Worth, ehemist and druggist, 45 Old Christchurch Road. It was alleged that the accused took the goods while being served with a seidlitz-powder, and gave them to some barmaids in the town.

Charles Carr (40), harness-maker, and James Daley (34), porter, Clerkenwell, were charged with stealing 235 steel and nickel spectacle-frames, the property of Messrs. Groos, Ltd., 24 Hatton Wall, at Clerkenwell Police Court on September 7. The articles were found under the mattress of Carr's bed and in a pillow-case at Daley's house. The prisoners were committeo for trial.

A lad named Harold Ray Bodicott was charged at Leicester on September 5 with stealing a photographic-lens, value 10*s.* 6*d.*, belonging to Messrs. E. H. Butler & Son, Humberstone Gate. A message was received purporting to come from a customer ordering two lenses to be sent. One was packed up and called for by someone, and accused telephoned for the second one, which was fetched by another lad sent by the accused, who pleaded guilty. He was bound over for six months.

Cricket.

Davy Hill & Co. C.C., playing at Crofton Park on September 5, achieved an easy victory over Stevenson & Howell C.C. Scores: D. H. & Co., 104 runs for four wickets; S. & H., 39.

Irish News.

Personal.

Mr. D. W. Elliott, pharmaceutical chemist, Shaftesbury Square, Belfast, has been selected to serve on the Sub-Committee for administering the Old-age Pensions Act, and the Chief Committee has confirmed the appointment.

Business Items.

The distributing agents in Ireland for Beecham's Pills—Messrs. Johnson Brothers—will in future despatch all orders for Dublin and the South of Ireland from their new address, 15 Temple Bar, Dublin.

At the Horse Show, Dublin, last week, Messrs. Hayes, Conyngham & Robinson, Ltd., pharmaceutical chemists, and Mr. D. M. Watson, M.C.P.S.I., Dublin, exhibited horse and cattle medicines and other pharmaceutical goods.

Empties Claim.

At the last Tullamore Board of Guardians' meeting a letter was read from Messrs. Boileau & Boyd, Dublin, claiming 7*l.* 0*s.* 3*d.* for unreturned empties. The Clerk said that this firm had not been contractors to the Union for two years. He understood that there is medicine in some of the bottles still. The Board made an order that the empties should be returned as soon as the bottles are empty.

Drug Control.

At Belfast Board of Guardians on September 8 a letter was read from Mr. W. J. Meharry, dispenser at North Queen Street dispensary, relative to the curtailment of the quantity of liquor morphin. hydrochlor. on the requisition from 7 lb. to 1 lb. by the Board. He said that that amount would be utterly inadequate to meet the requirements of the dispensary for a month. As it was prescribed by the medical officers 1 lb. of the drug would be sufficient for sixty-four 8-oz. bottles, but taking one day (September 2) he dispensed twenty-nine of such bottles, which would use up nearly one half of what the Guardians were allowing to last five weeks. The Guardians referred the matter to a committee.

Theft Charges.

At the Sligo Borough Court on September 5 a youth named Patrick Jenkins was charged with breaking into the chemist's shop of Dr. Denning, Sligo, with intent to commit a felony. The evidence showed that Dr. Denning had missed considerable sums of money from his till for the past couple of months, but was unable to discover the thief. As a last resort he hid in the pharmacy after shutting up the front shop, and at seven o'clock the following morning Jenkins, he alleged, opened the side door with a key and entered the shop. He went round the counter and was seized by Dr. Denning and handed over to the police. The accused was returned for trial at the next Quarter Sessions.

John McMahon, a packer in the employ of Mr. Samuel Gibson, wholesale druggist, King Street, Belfast, was prosecuted at the City Police Court on September 3 for having stolen a tinned tongue belonging to his employer. The case was adjourned for four weeks.

Scotch News.

Dundee and District.

The metric system has been adopted in prescription-writing by one of the leading medical men in Dundee.

A preliminary meeting was held on September 4 with the view of forming a Chemists' Assistants' Association in Dundee.

Edinburgh.

Edinburgh Pharmacy Athletic Club.—Three years ago the bowling section of this Club had a membership of twenty, but seventy chemists or assistants have competed this year, showing a satisfactory increase. The final was played on Tuesday last, and resulted in a win by seven shots for Mr. Nisbet. Prize-winners: Mr. Jas. A. Nisbet (gold medal), Mr. Jas. Cochrane (second prize), Mr. Wm. Winton (third prize), Mr. Sam Robinson (fourth prize), and Messrs. A. G. Paterson, C. Dodds, J. Cuthill, and W. Young.

Glasgow and the West.

A large clump of *Conium maculatum* just discovered within the city bounds is supposed to be its first appearance in Glasgow.

Mr. William Smart, chemist and druggist, 15 Randolph Street, Buckhaven, has opened an optical department in connection with his business.

Dr. John Burns, the oldest medical man in Glasgow, is receiving many congratulations on entering his ninety-fourth year; he celebrated his professional jubilee twelve years ago.

Doubt still exists with regard to the vacant Chair of Clinical Medicine in the University of Glasgow. A proposal is made to use the Royal Infirmary as a clinical school, which means its removal from the Western Infirmary or the creation of an additional Chair, but funds are not available for the latter desirable course. Meantime the students are waiting and wondering about winter classes.

Messrs. Frazer & Green's new "net cash" price-list just issued contains sixty pages, nearly half of which is a closely printed alphabetical list of preparations and chemicals, principally proprietaries, the remainder being advertisements. "F. & G.'s" preparations occupy two and half pages, and the introduction says the text contains only a limited number of the extensive stock of patent medicines; but it seems fairly complete to us.

Cattle-feeding Experiments.

A demonstration of the interesting experiments on calf-feeding carried out by the Aberdeen Agricultural College was given by Mr. James Hendrick, B.Sc., the Lecturer on Agricultural Chemistry at the South Fornet farm, Skene, on September 5, and was witnessed by a party of fifty persons, chiefly farmers. Six months' old calves had been fed over a period of six months with whole milk, or after the first four weeks on separated milk with substituted fat in the form of cod-liver oil and cottonseed oil. The cod-liver oil was assimilated from the outset by the calves, but the experimenters had to proceed with caution in increasing the quantity with cottonseed oil; 3½ cwt. of cake also was consumed by each batch of six calves during the six months. The cost of feeding per lb. of increase was: Whole milk, 4.24*d.*; separated milk with cod-liver oil, 1.78*d.*; separated milk with meal and cottonseed, 1.83*d.* The average increase in weight per calf during the period per 214, 176, and 156 lb. in the three respective sections.

French News.

(From the "C. & D." Paris Correspondent.)

A New Remedy for Vine-diseases.—Brine (1 lb. of salt to about 4 gals. of water) has been successfully used as a remedy for vine-mildew in the Saône and Loire Department, and, according to latest reports, bids fair to replace sulphate of copper for vine-spraying. The origin of the discovery was somewhat curious; some rose-bushes were being thus watered to kill lice, and some drops fell on a neighbouring vine. The grower remarked that the mildew had disappeared and told his neighbours, who experimented on a larger scale with excellent results.

Foreign Patent Medicines.—The Syndicate of Pharmacists of the Alpes Maritimes Department is agitating for protection against the introduction of foreign patent medicines into France, and have addressed a petition on the subject to the French Customs Commission. The Federation of Pharmacists of South-Eastern France has also had the subject under discussion and has referred it to a committee for examination. It may safely be said that, to most foreign manufacturers, the regulations concerning the importation of patent medicines into France already appear sufficiently rigid and well enforced; but as the Alpes Maritimes Department covers the Riviera, which is so much frequented by British, American, and German visitors, such foreign preparations as are sold in France are greatly in evidence there.

The Inspection of Pharmacies.—The official decree (signed by the Ministers of Agriculture, Justice, Public Instruction, Commerce, Finances, etc.) fixing the provisions of the Anti-Adulteration Act and regulating the inspection of pharmacies in France has recently been published. The principal provision is that the inspection shall be exercised exclusively by persons possessing the diploma of pharmacist. They can demand the assistance of the Commissary of Police (in rural districts, of the Mayor). The Corps of Inspectors is organised by districts, a list of names being proposed by the directors of the various schools of pharmacy and mixed faculties, but only becoming official when confirmed by the Ministries of Agriculture and Public Instruction and approved by the Prefect (Article 3). The officials responsible for the carrying out of the inspection is the Prefect of each department (in Paris, the Prefect of Police). Samples seized by the Inspectors are to be forwarded to the local analytical laboratory, which will be organised at the schools of pharmacy. A second decree, signed by the same officials (but dated a day later), regulates the seizing of samples, etc. This can be effected by Inspectors and Assistant Inspectors in "offices, laboratories, shops, workshops, trade vehicles, warehouses, railway stations, and ports." The local public authorities are "required to furnish all information necessary" to enable Inspectors to see that the Anti-Adulteration Act is not infringed, and all engaged in carrying goods in any way are to show all papers asked for, and to permit samples to be taken, should the Inspector judge necessary. If in the case of medicaments the nature or the quantity of the preparation seized does not allow of the regular division into four samples provided for by the Act, this formality may be dispensed with, but in this case the single sample must be addressed, duly sealed and with the proper papers (within twenty-four hours), to the Procureur of the Republic. The second portion of the decree provides for analysis. A "Section of Pharmacy" is added to the existing technical committee. This section, of which the Director of the Paris Superior School of Pharmacy is president, is necessarily consulted on all scientific questions. Analytical laboratories are to be organised in the Superior Schools of Pharmacy and the Mixed Faculties of Medicine and Pharmacy. The reports of the analyses will be addressed by the Director or Dean of these institutions to the Prefect, and an annual report of this analytical work will be presented by the Director or Dean to the same official. In the third portion of the decree, provision is made for "contradictory expertise" when demanded—*i.e.*, the owner of the samples may nominate an expert, and if his report does not agree with that of the official analyst a third is named as arbitrator.

South African News.

(From the "C. & D." Correspondents.)

Note.—"The Chemist and Druggist" is regularly supplied by order to all the members of all the Pharmaceutical Societies in British South Africa, viz.:

South African Pharmaceutical Association.
Pharmaceutical Society of Cape Colony.
Natal Pharmaceutical Society.
Transvaal Pharmaceutical Society.
Rhodesia Pharmaceutical Society.
Northern District Chemists' Association.
Pharmaceutical Society of Orange River Colony.

Cape Colony.

Salt or Sodium Chloride.—As an instance of the subtleties of the Customs tariff (says the "Cape Argus") some information of a decidedly humorous nature has just transpired. It seems that the up-to-date business men of Port Elizabeth had been used to importing common salt under its chemical name, sodium chloride, free, while the Cape Town merchants called it salt and paid 15 per cent. *ad valorem*. The result was that the Customs authorities raised trouble, and were for making the Port Elizabeth people bring the salt in as salt. As it was also sodium chloride, however, nothing could be done to stop the practice, and Cape Town is going to follow suit.

Orange River Colony.

Personal.—Mr. D. K. Petersen, of Petersen, Ltd., is paying Bloemfontein one of his infrequent visits.

A Fête of the South African National Organisation Union was held at Bloemfontein on August 12 and 13, but the proceedings, intended as a serious exhibition of South African industries, were allowed to degenerate to the level of a fancy fair. The only exhibit of pharmaceutical interest was Messrs. C. E. Gardner's "Doble's Lemon Squash."

Orange River Colony Pharmaceutical Society.—The monthly meeting was held on August 11 at Bloemfontein, when a discussion took place on the "Sale of Poisons and Patent-medicines Bill," recently withdrawn by the Government. It was resolved to obtain the views on the question of legislation in this matter from every chemist in the Orange River Colony, so as to enable the committee to formulate recommendations to the Government. A letter was read from the Assistant Colonial Secretary, stating in reply to the Society's communication that he was advised that the sale of medicines by hawkers was not a contravention of the Stamps and Licences Ordinance.

Transvaal.

Personal.—An interesting photograph appears in the "Transvaal Weekly Illustrated" of Mr. R. A. Champion, of Messrs. Champion Bros. & Co., chemists and druggists, Boksburg and Benoni, who with a party of four recently returned from a seven days' shoot in the district of Schweizer-Reineke with a record bag, consisting of 226 head, weighing 1,010 lb., mostly springboks, hares, and other game.

Australasian News.

The fullest information regarding the Australasian drug-trade and pharmacy is given in "The Chemist and Druggist of Australasia," copies of which can be obtained at 6d. each, post free, from the office of "The Chemist and Druggist," 42 Cannon Street, London, E.C.

New South Wales.

Dispensing-prices.—The Pharmaceutical Society has issued a circular dealing with the prices charged for dispensing prescriptions. There has been serious price-cutting in this department, and with a view to counteracting it the Society urge the adoption of a private price-mark which chemists should put on every prescription dispensed. The circular states that of late years patients have shown an inclination to get prescriptions dispensed at reliable pharmacies, to a great extent avoiding the cutting houses, therefore there should be very little risk in marking the price. It would be an advantage for country pharmacists

to follow the same rule—the city price being a good guide for them—but should they charge a different price, in accordance with the price agreed upon locally, they should re-mark the prescription.

St. George Pharmacists' Association.—The formation of the Northern Sydney Pharmacists' Association took place in May, and so far the meetings have been well attended. Information is now to hand that the pharmacists of the St. George district, Sydney, have started the St. George Pharmacists' Association. At the inaugural meeting on July 12 Mr. G. B. Warren was elected Chairman and Mr. O. H. Lofberg Secretary, and a discussion took place on the sale of poison by unregistered persons and regarding uniform hours for opening pharmacies. At the adjourned meeting on July 22 a deputation was appointed to call on the medical practitioners in the district requesting them to use the Australian Pharmaceutical Formulary preparations when prescribing.

New Zealand.

Drug-habit.—Dr. Mason, chief health officer, interviewed by a representative of the "New Zealand Times" in regard to the prevalence of the drug-habit, said the chemists of Wellington are extremely helpful to the Health Department and will do anything in reason to make it impossible to sell freely medicine containing noxious drugs. The cases of lunacy through the drug-habit are few in comparison with lunacy from alcohol. Drink is doing a million times more harm than drugs. He added that legislative restrictions which are likely to be imposed will have most valuable results.

Quackery Prevention Bill.—The "Chemist and Druggist of Australasia," commenting on this Bill (*C. & D.*, September 5, p. 387), says :

> This Bill, at first sight, promises to protect the public without interfering unduly with business interests. The demand for the publication of formula made in the previous Bill is abandoned. All medicines are left unchallenged unless the Chief Health Officer considers them harmful to health, or fraudulent or useless. This gives him immense power. In case of suspicion he can call upon the proprietor to modify his claims, or stop the sale. If the proprietor refuses, an appeal can be made to a Judge of the Supreme Court. All interests would combine to support the first man attacked, so that a fair trial would not be forfeited for want of funds. . . . The wording of the Bill puts positively what the New Zealand Conference adopted in the negative form as reported in last issue. We expect that the measure will be welcomed by all parties.

Tasmania.

Miller's Buildings.—The "Tasmanian Mail" of August 1 publishes a good illustration of the premises of Messrs. A. P. Miller & Son at the corner of Liverpool and Murray Streets, Hobart. The buildings were erected by the late Mr. A. P. Miller, from the design of the late Mr. G. Fagg, M.S.A., and are the most extensive chemists' and druggists' premises in the State. Besides the retail chemist's store, which occupies the most prominent part, there is ample room for the wholesale department provided in the Murray Street portion. A verandah runs right round the building.

Victoria.

Eucalyptus Poisoning.—Some few weeks ago we reported a case of poisoning by eucalyptus oil in New South Wales (*C. & D.*, August 8, p. 224), and now receive particulars of two cases at the Melbourne Hospital. Fortunately these cases were not fatal, but the symptoms were sufficiently serious to cause alarm.

Dentists Bill.—A Bill to amend the Dentists Act was read a second time in the Victorian Legislative Council on July 28. The dentists are not backward in the claims they are making on behalf of their profession, and if the Bill is passed they will have secured far more exclusive privileges than the medical profession or pharmacy. One clause reads :

> In the principal Act, the Dentists Act, 1898, and this Act the expression "dental surgery or dentistry" means the performance of any operation upon the natural teeth and their associate parts of a human subject, or the construction or adjustment of artificial dentures for such subjects.

This clearly means to make it an offence for an unregistered person to extract teeth. The promoters seem to recognise that in this Bill they are attempting to deprive people of rights hitherto enjoyed and clause 13 provides, not for the registration of people who are engaged in tooth extraction but for the "recording" of the names of certain persons practising dental surgery or dentistry. But, although these persons have their names "recorded," and are to have the same rights and privileges as they possessed "immediately before" the commencement of this amending Act, they must not take or use the word "registered" or any other word or sign implying or tending to the belief that they are registered as dentists. These people are to pay a prescribed fee. In relation to medical practitioners the fee is mentioned in the text of the Bill, and the use of the words "prescribed fee," instead of stating the amount, arouses the suspicion that it is the intention of the Board to impose a very heavy fee for this record. Clause 10 deprives medical practitioners of the right to practise dentistry, but clause 11 will give them the right to register as dentists on payment of a fee of two guineas within twelve months. If the Bill passes as printed no one in future will have the right to extract a tooth unless he is registered as a dentist.

Colonial and Foreign News.

German Spirit.—The following two occurrences tend to show how the German spirit "Centrale" works with its customers, after having passed a resolution, on August 22, to dissolve at the end of September. A short while ago the "Verband Deutscher Spiritus und Spirituosen-Interessenten" announced that the "Centrale" was asking an increase in price of 3m. from those customers in the Rhineland who were not bound to them by any delivery-contracts. This announcement has caused the "Centrale" a great deal of dispute during the past week (August 29). In the meantime the above association received news from the province of Hanover that the "Centrale" was asking an increase of 6m., in addition to the ordinary price, from its customers who were not bound by any special contracts. It must be added here that there is not the slightest reason for this sudden rise in price, because the stock at present in the hands of the "Centrale" is extremely large—at the end of July it was 1,024,693 hectolitres—in addition to which the last estimates of the potato crop speak of more than an ordinarily good yield. If we consider (says the "Rheinsche Westfälische Zeitung") that this cartel owes its existence solely to the present laws regarding wine-spirit it will be easy to understand why there is a general demand for changing conditions which show such a state of affairs. If the Government should adopt the plans for a monopoly it would not help to obviate these excesses much, although a great deal of harm may be done at any moment to steady industrial development.

Canadian Proprietary-medicine Act.—As intimated in our issue of August 8 this measure became law in July last, and full particulars are now available. The Act (No. 56 of 1908) for the regulation of the importation and sale of proprietary medicines in Canada provides, *inter alia*, that no proprietary or patent medicine shall be manufactured, imported, exposed, sold, or offered for sale in the Dominion if it contains (*a*) cocaine or any of its salts or preparations; (*b*) alcohol in excess of the amount required as a solvent or preservative, or does not contain sufficient medication to prevent its use as an alcoholic beverage; (*c*) any of the following drugs if the name is not conspicuously printed on and an inseparable part of the label and wrapper of the bottle, box, or other container (provided that the name of such drug may not be printed on the wrapper if it appears to the Minister of Inland Revenue that the proportion used is not dangerous to health); acetanilide and other coal-tar products, aconite and its preparations, arsenical preparations, atropine, belladonna and its preparations, cantharides, carbolic acid, chloral hydrate, chloroform, conia and compounds thereof, corrosive sublimate, cotton-root, croton oil, digitalis and its derivatives, ergot, essential oil of mustard, ether, hellebore, heroin, hyoscyamus and its preparations, indian hemp, nux vomica and derivatives, pennyroyal, phenacetine, prussic

acid, savin and preparations thereof, strychnine and its preparations, sulphonal, tansy, tartrate of antimony, veratria. Every importer or manufacturer of proprietary or patent medicines, and every agent of such importer or manufacturer, is to procure annually from the Minister of Inland Revenue a certificate of registration, costing $1, before offering any medicine for sale in the Dominion. In this Act "proprietary or patent medicine" means every artificial remedy or prescription manufactured for the internal use of man, the name, composition, or definition of which is not to be found in the British Pharmacopœia, the Codex Medicamentarius of France, the Pharmacopœia of the United States, of any foreign Pharmacopœia approved by the Minister, or any formulary adopted by any properly constituted pharmaceutical association representing the Dominion of Canada, approved by the Minister; or upon which is not printed in a conspicuous manner, and forming an inseparable part of the label and wrapper, the true formula or list of medicinal ingredients, which must not contain cocaine or any of its derivatives or preparations. All proprietary or patent medicines require to have the name and number under which the medicine is registered, with the words "The Proprietary or Patent Medicine Act," and also the manufacturer's name and address.

Pharmaceutical Society of Ireland.

COUNCIL-MEETING.

THE monthly meeting of the Council was held on September 2 at 67 Lower Mount Street, Dublin. The President (Mr. John Smith) presided, and the other members present were Messrs. H. G. Golden, W. F. Wells, C. Fairweather, J. Moffit, William Doig, J. H. Bowden, and Dr. Walsh.

Dispensers' Holidays.

Arising out of the minutes of last meeting the President, referring to an application received asking the Council to assist Poor-law dispensers to get their substitutes paid by the Guardians when they are taking holidays, said he had observed that the Sligo Guardians in granting leave of absence to Dr. Denning, their officer, had agreed to pay his substitute two guineas a week.

Mr. Wells: The Local Government Board agreed to it.

The President: The dispensers are not entitled to it. It is an act of grace on the part of the Guardians.

Mr. Wells: The infirmary with which Dr. Denning is connected have also given him an allowance for a substitute. The Local Government Board could instruct Boards of Guardians to make these allowances.

Hong-Kong Ordinance.

A letter was received from the Colonial Office enclosing a copy of an Ordinance passed by the Legislature of Hong-Kong with reference to the registration of chemists and druggists and the sale of poisons. The letter called attention to the fact that Section 3 of the Ordinance did not provide for the recognition of persons registered under the Irish Pharmacy Act of 1875, and stated that it was proposed to ask the Governor to have the oversight rectified, but that before this step is taken any observations that the Council desired to make would be received.

The President said they should inform the Colonial Office that the Acts of 1875 and 1868 placed the pharmaceutical chemists of Ireland and Great Britain on the same footing; and the answer to the letter would be that the Council wished that to be so in Hong-Kong. A recognition in Hong-Kong of their Act of 1875 would accomplish this and bring their licentiates into line with those of Great Britain who were there.

Examination-marks.

A discussion took place as to the method of marking in the pharmacy section of the Licence examination, and it was decided to amend the regulation on the subject so as to provide that the prescribed minimum should be maintained in each subdivision of the examination.

Some reports were read and approved.

Members Elected and Proposed.

The following were elected members of the Society: Mr. Andrew McClure, Newry; Mr. Abraham Porter, Irvinestown, co. Fermanagh; Miss Brenda Yates, Enniscorthy; Mr. Albert Owen Wells, Upper Sackville Street, Dublin; Mr. James Joseph Kerr, Clones.

The following were recommended for membership: Mr. Bernard Hirson, Dublin; Mr. Frederick Goodwin Young, Newbridge, co. Kildare; Mr. James H. Gowans, Antrim Road, Belfast; Mr. William Stark Lawrie, Clontarf, co. Dublin; Mr. Gerald Morewood, Herbert Place, Dublin.

The Council then adjourned.

British Association.

LAST week we gave a note on "Mnemic Matter" from the presidential address of Mr. Francis Darwin at the meeting of the British Association for the Advancement of Science at Dublin, and we now give further points of interest to our readers. The address to the Chemical Section by its President, Professor F. S. Kipping, D.Sc., F.R.S., of the University College, Nottingham, was concerned chiefly with the

Decadence of British Chemical Industries,

and the remedy advocated is, according to the Professor, research directly applied to technological problems. The Institute of Chemistry, the Technological Chemistry Departments at Leeds, Birmingham, and Manchester, and the professorial element all receive their modicum of hard words. The following are many of the salient points. There are few branches of industry in which chemistry is not of supreme importance, as seen in shipbuilding interests, the textile and brewing industries. The pæans of congratulations at the jubilee of the epoch-making discovery of mauve were marred by a note of lamentation over our lost industry, and statistical evidence discloses the fact that in the manufacture of "fine chemicals" the decadence is far advanced, while in the "heavy chemicals" the future is dark and threatening. Reviewing the new Patent Act the conclusion formed is that it will do little to foster British chemical trade and industry.

Contributory Causes

for our failure, after elimination of freights, tariffs, or alleged Government supineness in assisting our industry are: (1) the unsatisfactory condition of secondary education; (2) the nature of the training given to chemists; (3) the insufficiency of the time and money devoted to research in the manufacturing industries; (4) the lack of co-operation between manufacturers and men of science. In regard to the first cause, it is impossible to predicate whether the desirable results would be attained if the system of secondary education were improved, and at present there is no doubt we are moving in an exactly opposite direction. The manufacturers seem to attach great importance to the "practical side" or think that a hybrid chemist-engineer is required in a chemical-works, and it is from this point of view that large technicological departments are built and equipped for carrying out operations on a miniature scale, which training can only result in the production of a sort of combined analytical machine and foreman, and the eventual formation, unless the expenditure is practically unlimited, of something of the nature of a museum of antiquities. The conditions in a chemical-works cannot be successfully imitated in a training institution, and have the effect of rendering the works-chemist helpless when he passes from the elegant models to the workaday appliances of the manufactory. Here is touched the bed-rock of our trouble—the failure to realise that industrial chemistry is based on a foundation of continuous and arduous research-work. The manufacturer does not realise what his chemist ought to do, but expects some immediate results; he is generally disappointed, and there is an outcry for technical education owing to presumed ignorance on practical matters. Any suggestion of spending money on research-work is scouted as a mere waste, or, if a scientific problem intimately concerns some large industry, a bronze (or possibly a silver) medal, or even the extravagant sum of 20*l.*, is offered to the happy person providing a solution "on the cheap." Contrast the methods of the Badische Anilin- und Soda-Fabrik and of Meister, Lucius & Brüning.

The New French Codex.

In continuation of the article given in last week's issue we give further details of the changes that have been made in the new French Pharmacopœia, which comes into force in France on September 15.

The first twenty pages of the work are occupied with the legal notices which make the work official and the preface. Then follow 783 pages of the Pharmacopœia proper, in which the medicaments are given in alphabetical order, next eight pages are devoted to physiological preparations (serums and vaccines), and the same number of pages to veterinary remedies. The appendices are as follows :

List of poisonous substances which must be kept under lock and key.
List of medicinal substances which, although not subject to the poisons law, should be kept separate from other medicines.
Recommendations of the International Conference on the unification of the formulæ of heroic medicines.
Atomic weights.
Dosing of medicines by volume.
Specific gravity and alcoholometry.
Reagents and volumetric solutions.
List of medicaments which were in the 1884 Codex, but have been omitted from the present edition.
List of additions.
List of formulæ that have been modified.
Maximum doses of certain medicaments.
Abstracts of the laws and regulations concerning the curriculum and exercise of pharmacy.
Alphabetical index in Latin.
Alphabetical index in French.

It happens that the first medicament in the book is one of national significance—Absinthe (Grande). This will serve as an example of the arrangement of the monographs referring to articles of the vegetable origin. The French name, as above, is followed by the Latin name—*Artemisia Absinthium*, L.—with an indication of the natural order and the parts used. Then follows a description of the plant sufficiently minute to enable it to be identified—shape, colour, appearance, odour, etc. Finally, a paragraph is given in which is indicated the preparations into which the leaves enter; in this case those in which the fresh and dried leaves are used are separately stated.

The next monograph refers to acetanilide (the official name), which is followed by the synonyms phenylacetamide and antifebrine. Then are given the chemical formulæ, characters (appearance, solubility in various liquids), and tests of identification. Finally, in smaller type, are the methods of testing and assay, with an indication of the impurity which is being looked for.

Acetic acid, which is next given, is a type of the medicaments that are much more fully dealt with. In this case the monograph fills three pages, but one of these is a table of the densities of 100 different mixtures of acetic acid and water. The official acetic acid has a sp. gr. of 1.0748 with a percentage of 77 to 80 per cent. From this a 10-per-cent. acid is prepared. In accordance with the list of poisons in the appendix the words *à séparer*, in black type, are affixed to the acetic acid monograph as a recommendation to keep it separate from ordinary medicaments. The word "toxique" is employed in the case of virulent poisons. In the case of aconitine the caution reads : *Extrêmement toxique, même à très faible dose* (extremely poisonous, except in very small doses). It may be added that the size, wording, and colour of the poison label are prescribed by law in France. An example of the label is given in one of the appendices.

As illustrating the method used in the case of synthetic medicines, which are known under trade-mark names, we give the official title and synonyms of salophen.

Acétylpara-aminosalol.
Ether salicylique de l'acétylpara-aminophénol.
Amine acétique du para-aminosalol. To this an asterisk is affixed referring to a foot-note which reads : Salophène (marque déposée).
Salophenum.

It will be seen that in the official name no attempt has been made to overcome the objection which most prescribers offer to using the chemical names of synthetic remedies—viz., their inordinate length—but a fairly good choice of names is given.

Having thus indicated generally the arrangement of the work it will be convenient to consider some of the contents in groups.

The Essential Oils.

The essential oils of the new edition of the French Codex are described under the name "Essences" (Huiles Volatiles—Olea Ætherea), as resulting from the same operation as the distillation of the aromatic waters ; but certain oils, such as those of lemon and orange, are best prepared by expression. The following general tests are to be applied to all essential oils :

1. No oily stain is to be left on paper after evaporation of a few drops of the oil.
2. No distillate to be obtained by heating on a water-bath for fifteen to twenty minutes (in order to guard against the presence of alcohol).
3. If a distillate be obtained, it must not yield the iodoform-reaction.
4. Heat a few cubic centimetres of the oil in a tube closed with a plug of wool, in which a crystal of fuchsine is contained. Alcohol will condense and colour the wool through the solution of the fuchsine.
5. Shake the oil with an equal volume of glycerin, allow to stand for a few hours, when no diminution in volume should be observed.

Essential oils are to be preserved best in well-corked bottles, out of the light, and free from contact with the air.

Turning to the monographs on the various oils themselves :

Oil of Bitter Almonds.—The only constituents mentioned are benzaldehyde and hydrocyanic acid. Its specific gravity is given as 1.045 to 1.060, limits which do not include all pure oils. It boils at 180°. It is soluble in 300 parts of water at 15°, and in all proportions of 95-per-cent. alcohol. It is optically inactive. It may contain prussic acid, and a test is given to guard against the addition of nitrobenzene. No test is given for chlorine, which would have guarded against the presence of much of the synthetic benzaldehyde now on the market.

Aniseed Oil.—Both aniseed and star aniseed oils are included, under different monographs. The reasons for the different figures given are not apparent. Aniseed oil has a sp. gr. 0.980 to 0.990 at 17°, while star aniseed has the same gravity at 15°. Aniseed oil solidifies at 18° to 14° ; star aniseed oil at below 15°. Both oils are soluble in three volumes of 90-per-cent. alcohol, and both are freely lævorotatory.

Bergamot Oil.—Ester-value to be 35 to 40 per cent., which is reasonable. The specific gravity is 0.881 to 0.886. Soluble in all proportions in 95-per-cent. alcohol. Opt. rot. +4° to +8° in a 50-mm. tube. This latter figure should be up to +11°.

Cinnamon Oil.—Sp. gr. 1.024 to 1.040. It is soluble in all proportions in 90-per-cent. alcohol. Freely lævorotatory. Should contain 65 to 75 per cent. of cinnamic aldehyde.

Lemon Oil.—The specific gravity is 0.857 to 0.862. This is reasonable. The optical rotation is +57° to +67°, and the difference figure for the first 10 per cent. distilled is up to +5°. This is the best figure that any Pharmacopœia has yet given, and will be adopted by the American authorities in the future.

Eucalyptus Oil.—The specific gravity of the British Pharmacopœia is adopted as 0.910 for the minimum limit. The upper limit is 0.930. The oil is to be dextrorotatory, which excludes many of the very finest oils. Excess of phellandrene is guarded against, but no quantitative determination of cineol is given.

Neroli Oil.—Specific gravity is 0.875 to 0.880. It is soluble in all proportions of 95-per-cent. alcohol.

Clove Oil.—The sp. gr. 1.055 to 1.068 excludes many genuine oils. It is soluble in two volumes of 70-per-cent. alcohol. Freely lævorotatory. At least 80 per cent. of eugenol by absorption.

Juniper Oil.—Sp. gr. 0.865 to 0.885. Gives a turbid solution with five volumes of 95-per-cent. alcohol.

Lavender Oil.—Many of the best lavender oils are excluded by the requirement that the ester-value should be at

least 30 per cent. Fine oils distilled on the Italian frontier contain only 25 to 28 per cent. of esters. The specific gravity is 0.882 to 0.895. It is soluble in three volumes of 70-per-cent. alcohol.

Peppermint Oil.—Sp. gr. 0.895 to 0.920. Soluble in four to five volumes of 70-per-cent. alcohol, sometimes with opalescence. No optical rotation is given, which allows Continental oils to be admitted.

Orange Oil.—Sp. gr. 0.848 to 0.853. Optical rotation at least +95°.

Rosemary Oil.—Sp. gr. 0.900 to 0.920. It is dextrorotatory. This excludes much pure Spanish and some pure French oils, which are often lævorotatory.

Rose Oil.—The specific gravity is 0.855 to 0.865 at 20°. This temperature is an inconvenient one to make the determination at. It begins to solidify at 23°.5. No other figures are given.

Santalwood Oil.—The specific gravity is 0.975 to 0.985. It is soluble in five volumes of 70-per-cent. alcohol at 20°. It should contain at least 90 per cent. of santalol, and have an optical rotation of +17° to +19°. These requirements are more stringent than even those of the British Pharmacopœia, and it is hard to understand why they have been made more rigid. Many pure oils will be excluded.

Turpentine Oil.—Specific gravity is 0.864. Its refractive index is 1.4648 at 25° (this is the only oil whose refractive index is given). It boils at about 155°, and is lævorotatory, thus excluding most American turpentine.

Thyme Oil.—Specific gravity is 0.909 to 0.950. To contain at least 20 per cent. of phenols.

To sum up, we may say that in general the figures given are very fairly correct but they might have been much more amplified. However, the monographs on essential oils are a great advance on anything that the French authority has ever done before.

Personalities.

Alderman T. Scott Foster, chemist and druggist, who is in practice as a dentist, attended at Dublin to formally invite the British Association to held its annual meeting of 1911 at Portsmouth. The invitation was accepted.

Mr. Fred Coates, chemist and postmaster, New Basford, last week completed twenty-five years in the service of the Post Office. His biography and portrait are given in connection with this event in the "Nottingham Local News" of September 4.

Mr. Tom Reilly, the well-known English chemist on the Riviera, was recently married to Miss Alice Anne Abbott at Monte Carlo. Mr. W. McFadden, 62 Victoria Road North, Southsea, informs us that he is promoting a fund having for its object the presentation of a wedding-present from comrades.

Mr. H. T. Butler, the well-known secretary of Camwal, Ltd., has recently undergone two severe operations, but is now recovered and back at business. He called upon us one day this week, and although still a little weak as the result of his illness is as genial as ever.

Mr. F. J. Parkinson, hon. treasurer of the Blackburn Y.M.C.A., has intimated his intention of giving, in memory of his father, the late Mr. Christopher Parkinson, chemist and druggist, of King Street, Blackburn, a sum of 500*l.* towards the furnishing of the new Y.M.C.A. headquarters in Blackburn.

Mr. H. Palmer, son of Mr. J. Spencer Palmer, chemist and dental surgeon, Thornbury, gives, in the "South Gloucestershire Chronicle" for September 5, a graphic description of the rough trip of the "Cambria" from Bristol to Southampton during the gale on August 31. It does not appear to have been an exhilarating voyage.

Mr. R. Wright, F.C.S., the President of the British Pharmaceutical Conference, was the subject of an appreciative reference with portrait in last week's "Methodist Recorder." Mr. Wright is the senior circuit steward of the Buxton Wesleyan Circuit. Mr. A. R. Loten, chemist and druggist, Hornsea, Yorkshire, was also the subject of a similar reference.

Among the judges who will report on the exhibits in the Chemical Industry Section of the Franco-British Exhibition are Mr. Walter F. Reid, F.I.C., and Mr. J. C. Umney, pharmaceutical chemist. Mr Reid has already acted as a judge in several international exhibitions. Mr. Thomas Tyrer, Treasurer of the Society of Chemical Industry, was asked to serve, but declined as he considered his position in having to adjudicate upon the exhibits of firms which compete with him in business would be invidious. Mr. A. Barton Kent, Chairman of G. B. Kent & Sons, Ltd., has been appointed British juror in Section 98 of the Franco-British Exhibition for brushes, turnery, &c.

We have had a call from Mr. A. Charemza, pharmacist, 10 Srednia, Lodz, Poland, who is in this country as a member of a committee of Polish merchants who are seeking to establish closer commercial relations with the United Kingdom. Mr. Charemza informs us that British chemicals and pharmaceutical products would be welcomed, and from what he has seen of this country he is sure that British manufacturers are easily able to compete with German houses, which at present do the bulk of the trade in chemicals. Mr. Charemza would be glad to receive price-lists and catalogues, which may be sent to the Warszawskie Towarzystwo Farmaceutycene, Dluga, Warsaw (Association of Warsaw Chemists).

Mr. James Baxter, chemist and druggist, Grangemouth, figures as the "Man You Know" in the "Falkirk Herald" of September 2. Mr. Baxter, who takes a prominent part in local public affairs, is a native of Stirling, where he served his apprenticeship, afterwards becoming an assistant to Mr. H. C. Baildon, Edinburgh. While in Edinburgh he studied chemistry under the late Dr. Stevenson Macadam, and subsequently held assistantships in Perth and Falkirk. He began business on his own account in Grangemouth some forty years ago, being the first chemist to take up business there. Some eight or nine years ago he assumed Mr. Robert Marshall, a former apprentice, as a partner, and the firm—Messrs. James Baxter & Co.—have now two shops in Grangemouth. He is an ex-Councillor, having occupied the magisterial chair, and also for several years sat on the old Parochial Board.

A Farewell Dinner was given by the Inspector-General and Medical Staff at the Royal Naval Hospital, Haslar, in honour of Mr. Oswald A. Reade, pharmaceutical chemist, who is retiring after thirty-five years' service as dispenser in H.M. Naval Hospitals at home and abroad. Entering the service in 1873 at Haslar, Mr. Reade served successively at Ascension, Bermuda, Plymouth, Yarmouth, Malta, then Plymouth again, and finally at Haslar. During his last term in charge at Haslar he has largely developed the manufacture of galenicals, etc., and a large plant of machinery, electrically driven, for compressed tablets, etc., has been put down under his direction. Mr. Reade is a Westmoreland man with a love of his native hills, and, in keeping with this, his rugged and consistent character shows through even his refinement and the effects of an eventful life. He has devoted much time to botany and microscopy; elected Fellow of the Linnean Society in 1898, he has contributed several articles to that body, *e.g.* "Cinchona Cultivation at St. Helena," "Flora of Bermuda," etc.; he also assisted in compiling the "Flora and Fauna of Ascension Isle" in connection with the *Challenger* expedition. The naval dispensers at Haslar presented Mr. Reade with a dressing-case as a mark of their respect and good will. Mr. F. W. Hooper, chemist and druggist, who was for five and a half years in charge at Bermuda, succeeds Mr. Reade.

"Saccharin in Russia" is the title of an article in the "Torg. Prom. Gazeta," in which it is shown that saccharin began to be used surreptitiously in Russia in 1895. During 1900, out of 945 samples of foodstuffs tested, 259, or 27.4 per cent., contained saccharin. At the beginning of the present year tests were again made for the collector of indirect taxes, and 93 out of 201 samples of foodstuffs, or 46.2 per cent., contained saccharin.

A Jubilee in the House of Merck.

SEPTEMBER 1 was a red-letter day in the annals of the house of E. Merck, Darmstadt, for on that day two of the four principals of the firm—Privy Councillor Dr. Louis Merck, honorary doctor of medicine and engineering, Life Member of the Hessian First Chamber, and his cousin, Medical Councillor Dr. E. A. Merck, owner of the historic pharmacy—celebrated the twenty-fifth anniversary of their entry into the business. Records of long service are by no means rare occurrences at E. Merck's, and there are several employés still in harness who have even witnessed the fortieth return of the day they entered the firm.

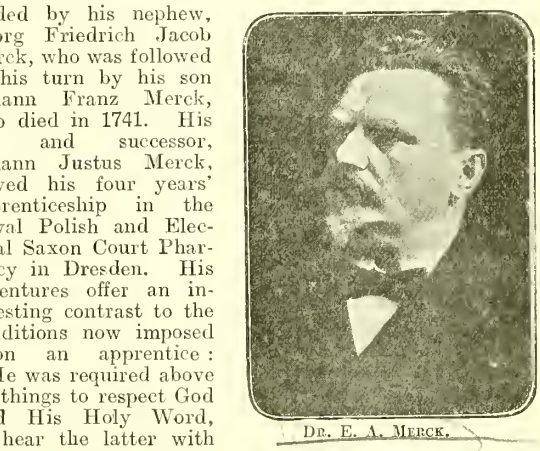
The principals themselves wished to celebrate the event quietly, but such an occurrence in one of Germany's leading chemical establishments could not be allowed to pass unnoticed by the outer world, and it shows the admirable spirit existing between principals and employés that the whole of the official staff and workmen enthusiastically joined together to mark this occasion as it deserved. All work was suspended for the day, and the whole of the staff and workers, male and female, met at 11 A.M. in one of the buildings, which had been specially cleared for the purpose (it took thirty-two railway trucks to accomplish this). This building was most tastefully decorated with evergreens, flowers, and flags. The senior member of the staff opened the proceedings by tracing the tremendous strides made by the firm in the past twenty-five years, which have also witnessed the erection of the present new works and the foundation of an independent house in the United States. The presentation from the staff took the form of an album of photographs of its members. Then followed an illuminated address from the workmen (presented by one who has seen forty years' service in the firm), as well as a floral arrangement.

DR. LOUIS MERCK.

The Grand Ducal Government was represented by the Minister of the Interior, who, in the name of the Grand Duke of Hesse, handed the insignia of the Cross of Honour of the Order of Merit of Philipp the Generous to Dr. E. A. Merck. Congratulations followed from the representatives of the firm, many of whom were present from all parts of the world. These were succeeded by speeches by the Mayor of Darmstadt, representatives of the chemical industry, the medical and pharmaceutical professions, the Technical High School, and the Chamber of Commerce, several illuminated addresses being presented. To commemorate the day, besides giving each workman a jubilee gift, the two Drs. Merck contributed a large sum to the pension fund for the staff, and the firm are to open a library for the use of all employés.

After these proceedings had ended, the whole company adjourned to a large marquee erected on an open space in the grounds, where, to the strains of a military band, interspersed by choruses by the factory Glee Club, a cold collation was served. It may be noted, in passing, that, besides numerous barrels of beer and numberless cups of coffee, 2,700 bottles of wine were provided for the occasion. In the evening all the principals accepted the invitation of the staff to that truly German institution a "Kommers." Besides the usual student songs, a theatrical performance was given by members of the staff—the plot, written by one of them, depicting in a highly successful manner how chemistry and botany, combined with pharmacy and commeree, aid the god of healing. Various solos and musical productions contributed to the success of the evening, and justified the words spoken by a director of a competing firm present as a guest: "That the perfect bond of union existing between principals and employés of Merck's would be hard to beat, and embodied the realisation of the ideal conditions which all should strive to attain in such relationships."

The history of the house of Merck has a peculiar fascination for the pharmacist, for it is a record of the application of science and scientific research, first undertaken in a small pharmacy, which has in the course of generations built up the present world-famed chemical-factory. Its history is also intimately connected with some of those great discoveries which during the past century have revolutionised the position of chemistry. The connection of the name of Merck with pharmacy dates back to August 26, 1668, when Friedrich Jacob Merck entered into possession of the Engel-apotheke in Darmstadt, and was granted the right to exercise his profession by the then reigning Landgrave Ludwig VI. of Hesse, and for two hundred and forty years it has remained in unbroken possession of the family. Upon his death in 1682 he was succeeded by his nephew, Georg Friedrich Jacob Merck, who was followed in his turn by his son Johann Franz Merck, who died in 1741. His son and successor, Johann Justus Merck, served his four years' apprenticeship in the Royal Polish and Electoral Saxon Court Pharmacy in Dresden. His indentures offer an interesting contrast to the conditions now imposed upon an apprentice: "He was required above all things to respect God and His Holy Word, to hear the latter with pleasure and to pray morning and evening. He was to have no money in his possession and to keep free from all frivolous and luxurious habits." The pharmacy had to be managed until he became of age to take personal possession, which he only enjoyed for four years. His son and successor, Johann Anton Merck, was only two years old at his father's death, and grew to be an ardent botanist and mineralogist, as well as, for those days, a great traveller, as an interesting diary of his journey through Switzerland and Italy proves. He was a friend of Volta and Spallanzani, the renowned Italian physicists. His great attainments brought him numerous honours, and his death at the early age of forty-nine in 1805 was felt as a loss to science, at that time on the threshold of great discoveries.



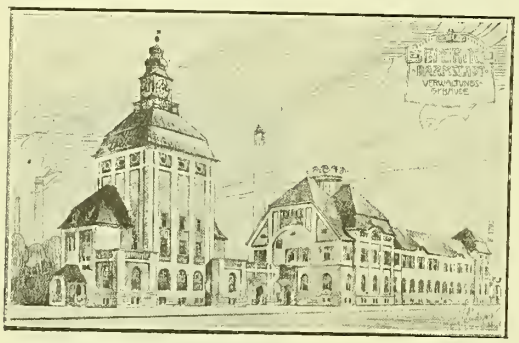
DR. E. A. MERCK.

THE NEW WORKS.

His son, Heinrich Emanuel Merck, was then eleven years old, and probably little dreamt that he was destined to transform the paternal heritage into the present huge concern. Special permission was obtained by his mother from Grand Duke Ludwig I. to lease the pharmacy for twelve years pending the coming of age of its owner. His pharmaceutical education was the best that the times could offer. He studied first at the famous Pharmaceutical Institute of Tromsdorff, in Erfurt, and, after serving as an assistant in pharmacies in Frankfort and Strassburg, com-

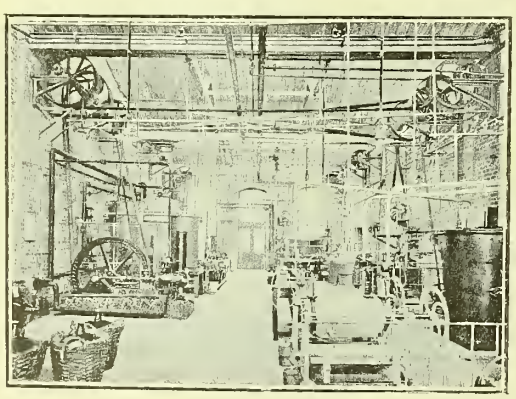
pleted his studies at the University of Berlin, and in 1816 took over possession of the Engelapotheke.

The startling discoveries achieved in chemistry in those days were transforming the mysterious art into an exact science. For a man of high scientific training and who had the advantage of being an intimate friend of Liebig, it was a natural sequence that he should feel impelled to turn his knowledge to account towards unravelling the mystery in which the peculiar properties of the drugs then used in medicine were enshrouded. The pharmacist of to-day can scarcely conceive the degree of enthusiasm that the isolation of the active principle of some familiar drug caused in the heart of his predecessor of a hundred years ago—what a vast vista of possibilities and speculation such a discovery opened out and how it revolutionised the therapeutic side



The Chief Offices.

of the art of healing. The preparation of pure alkaloids was the all-absorbing aim of the real founder of the factory, and to enumerate his achievements in this direction would be to recapitulate the steps made in that branch of chemistry during the first half of the past century. The manufacture on a commercial scale of emetine, strychnine, picrotoxine, morphine (1827), santonin (1856), and codeine (1886) practically followed their discovery. In connection with santonin it is interesting to note that it was Merck's preparation that was used by Robert Mayer (to whom we owe the mechanical theory of heat) in his research on santonin undertaken for his degree of doctor. Each succeeding



Interior of a Laboratory.

year witnessed important additions to the list of preparations manufactured. The first steam machinery was installed in 1840, and about the 'fifties atropine and its salts, cantharidin, theobromine, caffeine, digitaline, and colchicine—to mention but a few—were placed on the market. In 1862 cocaine was first prepared, but twenty-two years elapsed before this now indispensable drug was admitted into materia medica. It was Merck's cocaine that was used in the experiments of Koller and Freud which led to its introduction into therapeutics.

But alkaloidal chemistry was not the only subject specialised in; the preparation of galenicals, especially extracts, offered in those early days a wide scope for the application of scientific methods. The manufacture of chemicals, such as bromoform, pyrogallic acid, tannin, and silver nitrate, was taken up towards the middle of the last century, and rapidly assumed considerable proportions.

In a modest building in a garden situated just outside the town walls the foundations of the world-famed factory were laid; but very soon more accommodation became necessary, and in the course of time building after building was erected until a space of over twenty acres was occupied by the factory. Soon further expansion became impossible, as the rapidly growing town now encircled the works. Still the cry arose for more space, and premises had to be acquired in different parts of the town and adapted to meet the requirements of the moment. This state of affairs could not go on: the rapidly increasing business imperatively called for an adequate enlargement of the establishment. It was therefore decided to erect completely new works, and a site was acquired for this purpose. This was an undertaking of considerable magnitude, and many were the problems that had to be solved in the construction of so vast and intricato a concern, where the accumulated experience of years had to be blended with the rapidly changing phases of modern progress. In spite of the great business activity at the time owing to the Russo-Japanese war, the inauguration of the new factory took place in July 1904 without a hitch.

No pleasanter surroundings could be conceived than those in which the present works are placed, and this is one of the reasons why they are exempt from many of those features usually associated with the manufacture of chemicals. A mile to the north of the town, surrounded by green fields, with the long range of the Odenwald Forest to the east, the factory now occupies an area of seventy-five acres, and consists of 204 buildings. The equipment alone affords a striking illustration of the latest appliances that man's ingenuity has evolved, not only as regards machinery, but also for the protection and comfort of the employés. There is a commodious restaurant for the staff, and for the male and female workers large separate mess-rooms. The emergency ward—happily little used—is provided with a small dispensary. There is a rising colony of model dwellings for the workmen. The establishment may well be termed a self-contained town, for it possesses its own electric-power station, gas-plant, water-supply, carpenters' shop, and smithy, besides various repairing-shops ready to cope with any unforeseen emergency. Among the many accessories on the premises is a complete tin-box making plant.

The buildings on each side of the main entrance constitute one of the architectural features of Darmstadt, which prides itself on being an artistic town. These contain the chief offices and the scientific department with its well-equipped library. Here are the scientific laboratories devoted solely to research-work, and it is to earnest and steadfast work of this kind that Germany is largely indebted for the leading position she holds in the chemical industry. A part of the work accomplished is embodied in the text-books published by the firm and recognised as standard works in all scientific laboratories. Here, too, the chemical and medical progress of the world is followed, which finds an unbiassed record in "Merck's Annual Report," now published in four languages. This department is placed at the service of all who desire any information on chemicals, drugs, bacteriological products, etc., its aim is to be the connecting-link between scientist and factory. As we proceed we pass huge laboratories, some devoted to the manufacture of largely used chemicals, others to that of special preparations, such as dionin, bromipin, iodipin, stypticin, veronal, and perhydrol, to mention but a few well-known names. Here, too, fibrolysin is made, the latest addition to the list, its remarkable solvent action on scar-tissue effecting a cure where otherwise the surgeon's knife would have had to intervene. Other laboratories are devoted to the preparation of Merck's reagents. Here is the electro-chemical laboratory, and further on are the immense warehouses, where stores of crude drugs from all parts of the world are waiting to pass on into the laboratories, where they will have to surrender the secret of their potency. An important and interesting part is the bacteriological department, with its spacious paddocks and model

stables, where the animals are kept from which serums and antitoxins are obtained—the modern physician's powerful auxiliaries in his fight against so many forms of dread disease. The organic preparations, which are the modern equivalents for many of the loathsome formulæ of the Dark Ages, are here obtained by the latest and most approved methods.

As a Cerberus vigilantly guarding the exit of every product is the Control Laboratory, through which every preparation has to pass and comply with rigid tests before being deemed worthy of going forth bearing the name of Merck. Miles of railway lines intersect the factory directly connecting it with one of the chief arteries that link up Northern and Southern Europe. Communication is maintained among the various departments by a fully equipped telephone system, which is also connected to the trunk lines, and a special wire runs from the factory to the postal telegraph. The collection of awards granted at exhibitions all over the world dates back to 1830.

But in tracing the rapid growth of the factory one loses sight for the moment of the pharmacy, and to resume its history we must turn back to Heinrich Emanuel Merck, who died in 1855. His son and successor in the pharmacy, Dr. Georg Franz Merck, was in 1845 a student at the Royal College of Chemistry in London, and during his stay here he, in conjunction with Robert Galloway, made an analysis of the thermal waters of Bath, and later, during his studies at the University of Giessen under Liebig, discovered papaverine. He was in his turn followed by his son, the present owner of the pharmacy, Dr. Emanuel August Merck, one of the two principals of the factory who on September 1 celebrated the twenty-fifth anniversary of their entrance into the firm

The spaciousness of the factory, the general spick-and-span appearance of everything, the huge, airy, and well-lighted laboratories and workrooms, the vast field of work, covering as it does practically the preparation of all those agents that human ingenuity has conceived or subjected to its use in combating the ills that flesh is heir to, leave an indelible impression on the mind of the visitor to the works. It is with justifiable pride that the German can point to "E. Merck's" as one of the pillars in the edifice of Germany's commercial grandeur and scientific progress.

Information Wanted.

Inquiries for the names and addresses of manufacturers, or other trade information, not traceable by reference to the advertisement-pages of "The Chemist and Druggist" and the "C. & D. Diary," or not filed in our private register, are inserted here free of charge. Postcard or other replies to any of the subjoined inquiries (addressed to the Editor "The Chemist and Druggist," 42 Cannon Street, London, E.C.) will be esteemed.

41/67. Makers or agents for iodolysin?

39/63. Makers of "Cremosa" toilet soap?

44/53. Makers of Sandown bandages for hunting?

42/20. Who are the makers of Olympia suspenders?

44/5. Makers of "S." gold paint mixed in wooden boxes?

43/65. Makers of Junior's cloth balls, retailing at 3*d.* and 4½*d.*

38/34. Where can serpentine rock or snakestone be obtained? It resembles fullers' earth, and is used for polishing marble.

39/30. Where can gaslight postcards be obtained to retail at from 2*s.* 6*d.* to 3*s.* per 100; also postcard display stands and clips?

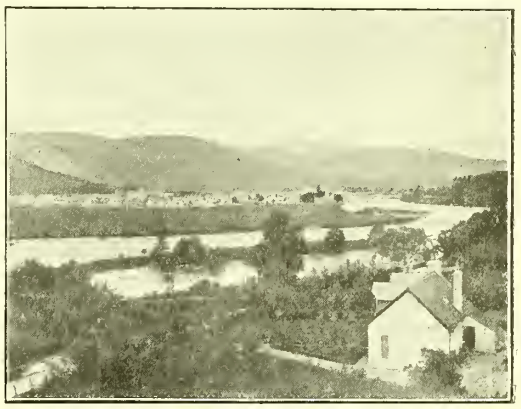
The American Pharmaceutical Association is in session this week. The meeting is being held at Hot Springs, Ark., from September 7 to 12, and a good list of papers has already been announced. The subjects before the Association cover a wider range than is allowed at the meetings of the British Pharmaceutical Conference.

The Silver City to Braemar.

[A Guide to the All-day Excursion from Aberdeen to Braemar which will be taken by the British Pharmaceutical Conference on September 17.]

I have seen
In lonely places, and in lonelier hours,
Beyond the involving veils of day and night,
Circumfluent o'er the shadowy drift of years,
A vision of the rainbow-aureoled face
Of her whom men name Beauty, proud, austere,
Inviolate, immortal, undismayed
By the swift-eddying dust of Wandering Time.
—*Fiona Macleod.*

SHORTLY after entering on the Deeside line at Ferryhill Junction, Duthie Park is passed on the left, then after the old Bridge of Dee, on the south side of the river, is Banchory House, the residence of Sir David Stewart, LL.D.,



Ballater, from Muick.

chairman of the Great North of Scotland Railway, and head of the Aberdeen Comb Co., Ltd., the largest business of its kind in Great Britain. A little further on is Ardoe, the residence of Mr. Alex. Ogston (Ogston & Tennant, soap-manufacturers), and still further, on the same side, is the Roman Catholic College of Blairs.

On the north side of the river there are a number of suburban villages—Cults, Beildside (where there is an excellent inland golf-course), and Murtle (containing the Deeside hydropathic establishment). Passing Milltimber, the traveller comes to Culter, where there is a large paper-works. On the left is Normandykes, which is believed to be the site of a Roman camp of the time of Antonius, A.D. 160. After passing Drum Station a glimpse is obtained of the tower of Drum Castle, the seat of the Irvines of Drum. This castle is believed to have been erected by King William the Lion. Durris, on the south side of the river, now claims attention. In common with other places in Aberdeenshire it is interesting, from an antiquarian point of view, on account of the stone circles situated at Eslie and the Raes of Clune. According to Sir Norman Lockyer the date of these circles is 600 B.C. Religious services being held at fixed hours of the night, the alignment of certain stones to certain stars constituted the clock of the astronomer priest. Farther along the old Castle of Tilquhillie, dating from 1576, is to be seen. On the north side Crathes Castle is passed on the right. It is the seat of Sir Thomas Burnett, Bart., of Leys, the Lord-Lieutenant of Kincardineshire, which county for a short distance in that quarter crosses to the north side of the Dee.

The village of Banchory, a popular summer resort, is next reached, and this is followed by the Hill of Scolty, with its monument in memory of General Burnett. On the outskirts of the village there is a very fine sanatorium. The Hill of Fare then comes in view (right). In the plain below the battle of Corrichie, which ended so disastrously for Mary Queen of Scots, was fought.

Beyond the station of Lumphanan, on the rising ground (right), is a small wooded enclosure, which is said to mark the site of Macbeth's grave. Further on, close to the railway (right) is Peel Bog, a circular earthen mound surrounded by a moat, dating from the twelfth century. King Edward I. was here in 1296. Beyond Dess (right) are the

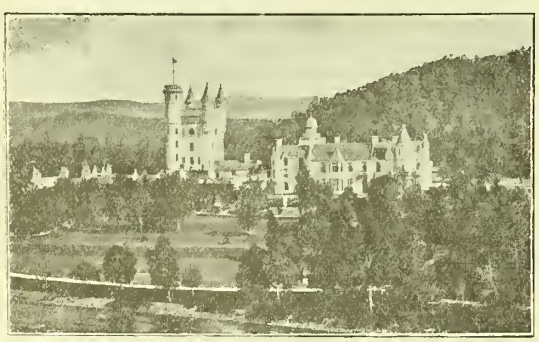
Loch of Aboyne and the hill Mortlich, on which is erected a monument to the tenth Marquis of Huntly; also Aboyne Castle, which from the eleventh century has been the chief seat of the Huntly family.

Aboyne itself is a popular summer resort. Glentana (left) is the seat of Mr. George Coats (of J. & P. Coats). This beautifully situated house was formerly the residence of Sir Wm. Cunliffe Brooks, Bart., the Manchester banker. Next comes the Muir of Dinnet and Dinnet Station. This to antiquaries is a most interesting region. Here are traces of prehistoric buildings. Canoes made out of the trunks of trees have been found about the loch, and various articles of stone, bronze, iron, and timber. In the loch are the oak piles of a crannog (a fortified island—Celtic) and drawbridge. The name of the neighbourhood, Davan, has induced the belief that here may have been the site of the Roman Devana. A small factory exists on the muir for the raising and treatment of a diatomaceous deposit (kieselguhr) which was discovered there in 1876. It is dug from under the moss, dried, and calcined. It is used as an absorbent of nitroglycerin, and also for polishing and other purposes familiar to pharmacists. The hill of Morven (right) and Ballaterich (left) have both been made famous through associations with Lord Byron. The wells of Pannanich (left), once a noted spa, now come into view. The Coyles of Muick are the mountains in the foreground, and beyond are "the steep frowning glories of dark Lochnagar."

Ballater is delightfully situated, standing some 700 ft. above the sea-level, having the tree-clad rock of Craigendarroch bounding it on the north-west and Craig Coillach on the south-east. From this latter hill one can obtain a fine view of the neighbourhood. The Glenmuick road is entered from the south side of the river. Glenmuick House occupies a commanding position near the entrance of the glen. Birkhall is beyond it a little.

The route between Ballater and Braemar is perhaps unexcelled for beauty in Great Britain. As one leaves Ballater the north road skirts the slope of Craigendarroch, the Gairn (a tributary of the Dee) is crossed at a picturesque point, and looking backwards from it an excellent view is obtained of Craigendarroch, with the deep gorge of the Pass of Ballater. The inn of Coillecriech is now reached.

Abergeldie Castle, where the Prince of Wales is at present residing, is six miles distant from Ballater. It is a good example of the sixteenth-century manor-house in Aberdeenshire; after the rebellion in 1715 it was garrisoned by Government troops. The manufacture of spiritus frumenti scotici is carried on at the Lochnagar Distillery on this estate, but otherwise there is not much of interest for pharmacists to note, for, as James Macpherson, in a footnote to Ossian, says, "The knowledge of curing the wounded was till of late universal among the Highlanders. We hear of no other disorder requiring the skill of physic; the wholesomeness of the climate and an active life spent in hunting excluded diseases."



Balmoral Castle.

Nearing Balmoral the manse and ruined pre-Reformation church are passed (left), while the new church of Crathie is a short distance westward. Balmoral Castle is built in the Scottish baronial style, facing Lochnagar. The natural surroundings are magnificent, the northern slopes of the mountain are pine-clad, and the castle itself is embosomed in trees, among which birches are plentiful. The rising ground to the south of the castle is dotted with residences for the royal servants. The hills in the vicinity are crowned with memorial cairns, chief among them being that on Craig Gowan to the memory of Prince Albert. On this birch-clad hill bonfires were lighted to celebrate the fall of Sevastopol and, more recently, the surrender of Pretoria.

Crathie Church, near Balmoral.

Proceeding, on the south side of the road Carn na Cuimhne (cairn of remembrance) is reached. Tradition has it that every clansman mustered for battle placed a stone thereon, and every survivor removed one, so many a Minvane must have mourned her unreturning Ryno. The Invercauld Arms, familiarly known as Inver, is soon reached, and also the famous Ballochbuie Forest; this latter, tradition says, was sold by The MacGregor for a tartan plaid. A bridge built by General Wade crosses the river here and stands as a monument to no mean engineer. The traveller next arrives at Invercauld Bridge, which should not be crossed without taking a look up and down the river. Invercauld House, on the north, is a princely building, the residence of the chief of the Clan Farquharson. "The Meikle Stane o' Clunie" is passed, about which many legends exist; one attributes its position to the physical strength of his satanic majesty, another has it that it was a haunt of the fairies. One instinctively associates a country like this with the stories of second sight—of the wrinkled old woman in a dwam and the horse with the clinking shoe. No doubt over yon distant mountain there dwells a native to whom the Ossianic conception of the clouds as the carriers of the spirit of his forefathers, and the wind as the voice of the departed, is a reality.

Inver.

Braemar, where lunch is to be taken, is now at hand, and the bracing ozonised air will be found to have sharpened the appetite to a wonderful degree. The town is 1,110 feet above sea-level. The Invercauld Arms Hotel stands on the spot where in 1715 the Earl of Mar raised the standard of rebellion. Braemar Castle is in the foreground, having been built by the Government as a barracks for the soldiers engaged in keeping the Highlanders in check after the rising in 1745. Ben Avon lies to the north, Ben Muich Dhui and the Cairngorms to the north-west, but the mountain view that will live most in the memory is Lochnagar.

Years have rolled on, Lochnagar, since I left you,
Years must elapse till I see you again;
Though nature of verdure and flowers have bereft you,
Yet still thou art dearer than Albion's plain.
England, thy beauties are tame and domestic
To one who has roved on the mountains afar.
Oh! for the crags that are wild and majestic,
The steep frowning glories of dark Lochnagar.

Observations and Reflections.

By "Xrayser."

A Lost Cause,

An unsuccessful hypothesis, and a played-out theory are descriptions of the Darwinian doctrine of natural selection quoted from Mr. Francis Darwin's presidential address to the British Association, and from an article in the August number of the "Contemporary Review" by Mr. Alfred Russell Wallace; while "The Times" newspaper, commenting on the address, tells us that "the assailants and critics of the theory are not few, and may be increasing." It is not necessary to add that the scientific heretics find no sympathy from either of these authorities; but the remarkable thing is that they are sufficiently formidable to be mentioned. Never before, perhaps, in the history of philosophy has a new explanation of cosmic processes bounded into popularity so rapidly as did Darwin's. In a few years after it had been formulated it was only scientific barbarians who did not at least profess to understand it, and not to pronounce its shibboleth meant practical outlawry from all the academies where sophists were wont to congregate. It can hardly be conceived that so complete a triumph is to enter on its decadent period in a mere fifty years. Why, faith in the Abracadabra formula continued for ten or fifteen centuries.

Mr. Wallace Names

the Neo-Lamarckians, the Mutationists, and the Mendelians as the principal antagonists of the Darwinians of to-day. It would be necessary to reproduce his essay pretty fully to show how these differ from the now orthodox creed and among themselves. Briefly, however, they seem to argue that occasional variations—sports, as Mr. Wallace terms them—may be perpetuated independently of environment, and lead to the belief that something inherent, and not external influences, accounts for the origin of new species. One learned botanist, Dr. Hugo de Vries, of Amsterdam, has written a great work in two big volumes dealing solely with his experiments with the evening primrose (*Œnothera Lamarckiana*). He is a leader of the Mutationists. Mendel was a Moravian priest who experimented for many years on the cultivation of peas, arriving at conclusions of the character suggested above. Mr. Wallace probably demolishes their attack on the fortress which he did so much to strengthen, and he has always been a frank and honourable controversialist; but this time he rather prejudices his case by treating his opponents with a certain contempt, likening their evidently serious contributions to Mr. Pickwick's "Speculations on the Source of the Hampstead Ponds, with Observations on the Theory of Tittlebats." If this is a fair comparison, if it is even fair humour, Mr. Wallace was not justified in honouring the opposing treatises with his criticism at all; if it is unfair, sympathy is naturally diverted to the opposite camp.

Mr. Darwin's Defence

of the Darwinian doctrine is more subtle. Apparently his purpose is to show how natural selection works. The stimuli, which may be what we understand as the forces of the old environment, create "engrams," or impressions, upon receptive cells, and the mnemic faculty fixes these engrams and makes habits of them. Cells which are not responsive to the stimuli are ultimately discarded. How much of this process is psychical and how much material I cannot make out from Professor Darwin's address, and, indeed, it would need a special education to be sure of his meaning at all. It cannot be expected that a branch of scientific research so remote from ordinary people's way of thinking can be made clear at first reading; but Mr. Darwin was assuredly a little less considerate of the multitude than he ought to have been. "I need only mention," he said, "the names of Vöchting, Goebel, and Klebs among botanists, and those of Loeb, Herbst, and Driesch among zoologists, to remind you of the type of research to which I refer." To how many persons in his picked audience at Dublin, not to mention the newspaper readers of the next morning, did that elucidation convey any idea of the drift of his argument? Later on he came to a cleavage between his own views and those of an evidently eminent worker in the same field of research named Weissmann. This authority, it appears, holds that "the orderly distribution of determinants depends primarily on the ids where they are held together by vital affinities." Even with the context the number of people who can guess where Weissmann has gone wrong must be very limited. It must be, of course, admitted that the technical terms of any branch of learning can never be translated into the language of everyday life: there are no exact equivalents for them. But the President of a British Association who really desired to promote the advancement of science would minimise the inevitable obscurity of his exposition to the utmost of his ability, even if to do so he had to use language which was a little less precise than he would like it to be.

In the Chemical Section

Professor Stanley Kipping based a rather lugubrious address on statistical evidence of our serious condition, which he lightly told his audience might be found in the technical journals and in the Board of Trade returns of recent years. He did not offer a single figure, which—at least as far as the Board of Trade returns are concerned—was prudent for the sake of his argument. In the seven completed years of this century British exports of "chemicals, drugs, dyes, and colours" show an increase of just about 50 per cent. It is quite possible that this apparent progress can be explained away, but Professor Kipping says the evidence is to be found in the figures themselves, which it is not. Of course, it is quite well known that there are many branches of chemical industry in which British manufacturers are being beaten, but this is not invariably the case, and if they are to recover their supremacy it will be by more courageous enterprise on the part of the manufacturers themselves rather than by the aid of young students fresh from college. In the classic instance of the aniline dyes, which Professor Kipping, like all the Jeremiahs who have preceded him, of course quoted, let it be remembered that the scientific impulsion came from this country, and Germany provided the commercial talent.

The Medicine-stamp Revenue

increased by 7,000*l.* last year, or by 2 per cent. The population of Great Britain grows by about 1 per cent. annually. These relative increases have similarly corresponded, as appears from the table published last week, if the past ten years instead of the past twelve months are taken. It is a melancholy prospect for the "Lancet" and its friends.

The Drug Stores Association

is congratulating itself on the work it has carried on on behalf of unregistered chemists. The Executive of that estimable body ought to be informed that there are no such persons as unregistered chemists. It is for them to find a more correct designation.

Russian Platinum.—The exports of platinum from Russia to the United Kingdom during 1907 amounted to 2,268 lb., valued at 151,789*l.*, against 1,985 lb., valued at 72,526*l.* in 1906.

Editorial Comments.

Codex Medicamentarius Gallicus.

The first Pharmacopœia of the London College of Physicians was issued in 1618, but it was not till 1639 that the first French Pharmacopœia appeared. It should, however, be mentioned that in 1590 the French Parliament decreed that the Faculty of Medicine should elect a committee with a view to preparing a dispensatory for the guidance of the Paris apothecaries. The decree was never executed, and although a committee was actually appointed in 1597, nothing further was done until Louis XIII. took the matter in hand. The result was the appearance of the first Paris Codex in 1639. Several editions were brought out, but after the Revolution, on the 21st Germinal of year XI., a new law was passed governing the conditions of publication. In 1816 the Codex Medicamentarius was

brought out, subsequent editions being published in 1839, 1866, and 1884, the last one being partly brought up to date by the publication of a Supplement in 1895. It is the last-named edition which a decree of M. A. Fallières made on July 17 has deposed from September 15 in favour of the new edition which has taken nine years to complete.

As we have indicated, many alterations have been made in the volume, although the external appearance of the work is similar to its predecessors. The 1866 edition of the Codex was arranged in chapters, "as if it were an analytical treatise on pharmacy," to quote the preface of the new edition. In the 1884 Codex the book was divided into four sections; but in the present work, following all the recent Pharmacopœias, the medicaments are arranged alphabetically, with the exception of short chapters devoted to opotherapic medicaments and veterinary preparations. The alphabetical arrangement is more perfect than is usual in official books. The acids, for instance, are not put under the general name of acid, but under the specific name—such as acetic, tartaric, etc. In France the preparation of serums is subject to a special law passed in 1895, which is a reason for treating these separately. To give an idea of the changes that have been wrought in the new edition it should be mentioned that ninety-one chemical remedies, more than 500 galenicals, and 200 drugs have been suppressed; theriaca, with its fifty-six ingredients, has at last disappeared, after having held its sway for hundreds of years. The additions number 150, and include serums and vaccines, fluid extracts, and subcutaneous injections, which are added for the first time. In regard to the deletions, the question has been raised as to whether the medicaments that have formerly figured in the Pharmacopœia preserve a legal existence, or must be considered as secret remedies coming under the ban of the Law of Germinal of the year XI. The possibility of such a ludicrous position as that a medicine of known formula could be legally considered to be a secret remedy has been avoided by a decision of the Codex Committee that the various editions of the work must be looked upon as a whole. This decision, it is added, does not apply to formulæ that have been modified, only medicines prepared from the new formula can be legally sold after September 15. Some 110 preparations have been modified in the new edition, many of the alterations being made, as we have previously emphasized, in conformity with the recommendations of the International Conference. The changes are duly set forth in a series of appendices, which include a table of maximum doses, an innovation added in answer to the prayer of many petitions to the Minister of Public Instruction, one of these being from the Association Générale des Pharmaciens de France. Attention is called to the list in the preface, and medical men are recommended to indicate larger doses in prescriptions by the words "*je dis*" to show that the quantity ordered is intentional, and not a slip of the pen.

We propose, in continuation of the notes begun in last week's issue, to indicate in detail the changes that have been made in the formulæ and the other alterations that have been made to bring the work up to the standard demanded by modern practice; but here we may quote the graceful tribute which M. Landouzy pays in the preface to the worth of those members of the Commission who died during the progress of the work:

> The work involved by such [numerous] modifications and by such a thorough revision of the French Pharmacopœia was both long and tedious.
>
> It was indeed so lengthy that many members of the Commission were missing before the work, which each had made his own, was completed; M. Vigier, for instance, Professors Planchon, Prunier, Moissan, and Paul Brouardel, whose collaboration was as whole-hearted as it was intelligent.
>
> The knowledge of pharmacognosy possessed by Planchon, the mastery of chemical pharmacy displayed by Prunier in his precepts, the judicial attitude exercised by Vigier with regard to all pharmaceutical questions, the keen analytical and synthetical mind of Moissan, the clinical and therapeutical acumen shown by the former Dean of the Faculty of Paris, as well as his intimate knowledge of the laws and regulations regarding the study and practice of medicine and pharmacy, all combined to enlighten and facilitate the debates of the Commission and frequently inspired its decisions.

The Codex contains 1,000 pages, and each bears ample evidence, in the mass of detail that is given, of the thoroughness with which the Commission have carried out their labours. The Pharmacopœia maintains the standard of French pharmacy and preserves the national characteristics at the same time that it truthfully reflects the scientific trend of the age.

Foreign Trade in August.

THE contraction in trade, which has been more or less general throughout the world for the greater portion of the year, is still going on, if we may judge from the Board of Trade Returns for the month of August. The figures are the worst of the present year; but this might have been expected, as August is the premier holiday month. Imports fell by 6,544,396*l.* to 42,746,051*l.*, while exports of British goods declined by 7,012,368*l.* to 30,342,676*l.* It should be noted, however, that there was one working day less in August 1908, but this would only slightly modify the figures, which are as follows:

—	August 1908	Decrease on 1907
	£	£
Imports	42,746,051	6,544,396
Exports	30,342,676	7,012,368
Re-exports	6,819,707	547,494
Total ...	79,908,434	14,104,258

As compared with the more normal year of 1906, the total decline is 9,397,457*l.*, of which six millions was in imports and three millions in exports. Last month the chief decline was in food, drink, and tobacco, by 3,400,739*l.* Secondly, the raw material imports fell off by 1,841,070*l.*, these figures including a shrinkage of 445,317*l.* in oil seeds, fats, gums, etc., imports of which amounted to 2.5 millions; and, thirdly, the decline in manufactured articles amounted to 1,285,844*l.*, these figures denoting an all-round shrinkage, including one of 125,303*l.* in chemicals, drugs, dyes, and colours, the imports of which amounted to 826,060*l.* In British exports the decrease in manufactured articles amounted in the aggregate to 6,161,386*l.*, made up of cotton (1,852,900*l.*), iron and steel (1,037,800*l.*), wool (851,600*l.*), new ships (462,500*l.*), miscellaneous textiles (391,703*l.*), miscellaneous metals (240,875*l.*), and chemicals, drugs, dyes, and colours (175,000*l.*). Under raw materials the loss was 554,018*l.*, this including a decline of 369,412*l.* in coal, and in food, drink, and tobacco the shrinkage was 188,000*l.* Turning to individual exports in August, the depressed condition which prevailed last month is clearly reflected in the diminished shipments of heavy chemicals and allied goods. Thus soda-compounds fell by 100,400 cwt. in weight and 918,000*l.* in value; exports of sulphuric acid dropped from 10,760 cwt. to 5,955 cwt., crude and distilled glycerin from 19,415 cwt. to 14,090 cwt., and dyestuffs from 21,593 cwt. to 13,790 cwt. About the only feature is the expansion in sulphate of copper, the exports of which doubled last month, attaining 1,541 tons; for the eight months ex-

ports reached 31,477 tons, valued at 1,498,264*l.*, or 10,000 tons more than in the preceding year, thus indicating the supremacy of British make. Quinine shipments declined by 50,000 oz. last month, and the exports of unenumerated medicines were 36,244*l.* less. Painters' colours and materials only participated in the slump to a slight extent, the August figures being fairly well maintained.

An indication of the course of our overseas trade during the eight completed months of this year may be seen from the following table giving the comparisons for the past two years :

Eight Months' Trade.

—	1908	Decrease on 1907	Inc. or dec. on 1906
	£	£	£
Imports ...	397,793,657	– 42,045,186	– 10 208.505
Exports ...	254.041.796	– 30 083,048	+ 6.5'2,704
Re-exports ...	52,426,966	– 13,877,782	– 4,975,381
Total ...	694,262,419	– 86,006,016	– 8,671,182

Manufactured goods are chiefly responsible for the fall in export trade this year, these alone accounting for 28 millions out of the 30 millions decline. Taking imports and exports together, it is clear that there has been a considerable diminution in purchasing power both at home and abroad, but it must be noted that the above comparisons are with two good years. In certain directions there have lately been signs of a revival in trade, and we should not be surprised if the September returns show an improvement in some of the staple industries.

Cape Tax on "Patents."

Messrs. Lennon, Ltd., inform us that they have heard by cable from Cape Town that the Cape Colony Government has now passed the portion of the Budget referring to the new patent medicine duties, which have been definitely fixed as follows :

When the retail selling value, exclusive of the stamp duty, does not exceed in value—

s.	*d.*		*s.*	*d.*
1	6	a stamp duty of	0	2
2	6	,,	0	4
4	0	,,	0	6
10	0	,,	1	6
20	0	,,	2	6
30	0	,,	4	6
50	0	,,	10	0
over 50	0	,,	20	0

The onus of fixing the stamp is to fall upon the retailer.

The duties now fixed agree with those as given in The Chemist and Druggist of July 25 except that the lowest value has been raised from 1*s.* to 1*s.* 6*d.* The chief organisations of chemists exercised all their influence to obtain a modification of the three lowest values but were unsuccessful. It was hoped to get the second amount raised from 2*s.* 6*d.* to 3*s.* 6*d.* and the third from 4*s.* to 5*s.*, but the Government would concede nothing more than 6*d.* on the lowest value.

The attitude of the Cape Premier (Mr. Merriman) is known to be antagonistic to the proprietary medicine trade as may be judged from his remarks, which were reported in our issue of July 25 at the time the Budget was introduced. In addition to the above proprietary medicine taxes the Premier also proposed to raise the annual chemist's and druggist's licence from 5*l.* to 7*l.* 10*s.*, adding an extra 1*l.* to cover the right to sell proprietary medicines. He also proposed to raise the general dealer's licence, which a chemist has to procure if he wishes to deal in, say, photographic sundries, and if he should accept an agency for a foreign firm there is also an annual licence of 50*l.* to pay, which is double the amount previously exacted. And for importers there are to be graded licences up to 20*l.* Lastly, there is the income-tax, another new impost, which falls upon everybody whose income exceeds 50*l.* per annum. All these proposals are likely to be carried through, as there is a deficit of almost 500,000*l.* to be met. In view of the above increased taxation it looks as if the chemist is going to bear more than his fair share of the burden.

Taxation Changes.

Chemists in general, and especially those possessing a post-office business, cannot but be interested in a change introduced by this year's Finance Act. It is the taking away from Excise control of all local taxation licences and placing it in the hands of county councils and boroughs. These local taxation licences comprise the establishment licences—male servants, carriages, and armorial bearings—game, gun, and dog licences. The King will fix the date of transfer, and, looking to the fact that the Excise officers have already begun to apply the oar in pulling the new craft—the Old-Age Pension Scheme—to the landing-stage on next New Year's Day, this particular date cannot be afar off. The local taxation licences are so much cargo to be jettisoned on the first opportunity by the Excise Department, and the heaving-over will occur directly the way is clear. The smoothing process is to be oiled with a monetary lubricant of 40,000*l.*, but, notwithstanding the fact that county council officials will administer the dog, carriage, and other laws, any extra revenue brought in locally will not constitute so much additional local gain. The present adjustment respecting the distribution of the proceeds of the local taxation licences will not be altered. Unless, therefore, some reward is held out to the local council's or borough's official to detect unlicensed traps, dogs, etc., the inducement to augment the parish revenue will be so small as to be in danger of disappearance. These establishment licences expire on December 31, and there are but four months for the erection and application of the necessary machinery. Another matter of passing interest is the fact that the Finance Act, 1908, institutes another 5*s.* licence. It falls to the Irish tobacco-planter. Like the chemist's crown, it is imposed for registration-purposes, there being a duty behind it as in the case of stamped medicines. The Irishman is to pay a kind of preferential duty on his home-grown weed—2*d.* per lb. less than that paid by the foreigner. The 2*d.* is supposed to be for providing accommodation and meeting other official requirements, thus equalising matters with the 3*s.* per lb. import duty. When first introduced into Europe, tobacco was held out as a universal panacea, and its entry into England is alleged by Camden to be due to the indigestion suffered by the sea-dog Drake. If Irish "home grown" could but continue the cure, its popularity would compel every chemist to take out a tobacco-licence, and so recall the time when apothecaries only were allowed to dispense such a valuable and divine herb. From the "divine herb" period to that of "insecticides" is a great interval—and fall. The administrative "change-over" of the chemists licence and "re-labelling" of the medicine duty naturally called attention to the fiscal method of raising revenue by means of revenue stamps on manufactured articles. By stamping goods such as medicines, Cavendish tobacco, playing-cards, mixtures of coffee and dandelion, etc., a glance reveals the fact that such stamped articles are duty-paid ; whereas by charging duty by weight or measure in the factory, bonded warehouse, or at the ship's side no ready

means of inspection can reveal their tax-paid character. Doubtless there are difficulties in the way of applying stamps to goods in bulk—tea, for instance; but if the coming air-ship is going to be the smuggler's friend in the future for taxed articles of small bulk like perfumes and saccharin, it would follow that the extension of the method of collecting revenue on the stamped-medicine principle is likely to come about sooner or later. Changes are in the air, and taxation is one of them.

Civil List Pensions.

Each year a list is published of pensions granted to deserving persons under the Civil List Act and charged to the Consolidated Fund. A return has now been presented in the form of a White Paper of all the persons in receipt of these pensions. Although there are many names in the list of persons connected with well-known scientists, we only refer to the matter because some of the earlier grants form links with an older generation, and show that sometimes, although an altruist may not reap a full monetary reward while living, the State does not forget surviving relatives who require assistance. One of the earliest-granted pensions on the list is 150*l*. a year to the daughter of the late Dr. Paris. This dates from 1858. Another pension of the same year is one of 50*l*. to Miss Archer, whose father was a pioneer in the science of photography. Professor Faraday's niece draws a pension of 150*l*. a year, granted in 1868; and Lady Brewster, widow of Sir David Brewster, has one of 200*l*. granted in the same year.

Chlorate Dangers.

Major Cooper-Key (Chief Inspector of Explosives) has issued a report on the explosion, or series of explosions, which occurred at the stores of Thompson, Son & Williams, Hulme, Manchester, under circumstances reported in our issue of June 27 (p. 955). The Inspector attributes the origin of the disaster to the presence of dust on the floor of the warehouse. It appears that the warehouse contained many tons of chlorate of sodium, chlorate of potassium, and chlorate of barium, stored in barrels lined with paper, while in the adjoining yard there were twenty-eight barrels of varnish. A labourer named Wood, in reaching a winch-handle, jumped from a barrel and struck a spark with his boot, and then saw a flame. Rubbing the place with his foot only made the flame worse, and soon afterwards three explosions occurred. The Chief Inspector says he is of opinion that the fire was undoubtedly caused by the friction of Wood's boot on a mixture of chlorate of sodium or potassium and organic dust on the floor of the warehouse, the presence of this mixture being proved beyond question by the rapid spread of the flame when rubbed with the foot. In spite of the apparently dangerous properties possessed by chlorate, Major Cooper-Key remarks this is the first recorded accident, other than those due to chlorate-of-potassium lozenges, that has occurred in this country in connection with the storage of these salts since the St. Helens disaster in 1898. As regards chlorate of potassium particularly, large quantities of which are manufactured in this country and imported from abroad, few precautions are adopted in the storage of it, and yet accidents are so rare as to render statistics valueless. After this second warning, however, Major Cooper-Key remarks that manufacturers and others will do well to consider whether it it is not to their best interest to render the chance of accident yet more remote by adopting precautionary measures, such as—

1. The elimination, so far as may be possible, of combustible material in the packages containing chlorate.
2. The establishment of separate buildings, of fireproof construction, for the storage of chlorate.
3. Absolute cleanliness—*i.e.*, the outside of the kegs, the floor and walls of the store should be kept clear of all dust and dirt, and no one should enter the building in his ordinary boots. Either these should be taken off or "overshoes" should be provided as in a gunpowder magazine.

Trade Notes.

Synthetic Camphor.—Messrs. Schering's have commenced the manufacture of synthetic camphor at their new factory at Canning Town. The process has been working for a fortnight.

Messrs. H. Bronnley & Co., Ltd., Warple Way, Acton Vale, London, W., have sold replicas of their exhibit at the Franco-British Exhibition to the Army and Navy Stores and W. Whiteley, Ltd.

Bovril Bonus.—Bovril, Ltd., 152 to 166 Old Street, London, E.C., announce in our advertisement columns their season's bonus terms. The sale of bovril is again to be stimulated by the distribution of coupons entitling the holders to one of the Bovril pictures, which are gravure reproductions of copyright works of art.

Proset, the new non-alcoholic fruit beverage, which is a family drink for winter and summer, is being vigorously pushed by the proprietors. The public are being familiarised with the name and made to inquire about the beverage at their chemist. Proset, Ltd., the proprietors, have offices at 199 Piccadilly, London, W.

Mosquito-destruction.—In the Army Medical Department Report for 1907 are recorded experiments made to find a cheap substitute for kerosene to destroy mosquito larvæ in drain-gratings and small collections of water. It was eventually found that Jeyes' Fluid would do the work of ten times the amount of kerosene, and, moreover, remains effective until washed away at the rainy season.

Optical College.—Mr. John Lothian, the Glasgow College of Optics, sends us a copy of the new edition of the college prospectus. The classes are conducted by Mr. Lothian (pharmaceutical chemist), Mr. T. S. Baird (optician), and Mr. Peter Fenton (chemist and druggist). A course of evening classes is to commence on October 9, about which particulars can be had by addressing the Secretary, 180 West Regent Street, Glasgow.

Northampton Institute.—The new prospectus of the classes at the Northampton Institute, Clerkenwell, London, E.C., is now published. We referred to the optical classes in our recent educational number, but note that the scope of the optical course is being further developed. There are many other classes on technical subjects—chemistry, metallurgy, and electricity—which are worth consideration by those pharmacists who are specialising on the scientific side.

"Business Building."—This is the title of a monthly journal for business men which is being produced by Messrs. B. Whitworth Hird, Ltd., advertising specialists, Colegate House, Colegate Street, Norwich. A special offer is made of designs for handbills or newspaper advertisements. It is noted incidentally that the first subscriber to the new publication is a Glasgow chemist. A sample copy of the "Business Building" will be sent to any of our readers who apply to the company.

Almanacks for 1909.—Messrs. James Townsend & Sons, Exeter, send us samples of the almanacks and calendars for chemists' distribution which they have prepared for next year. The variety that is sent us seems sufficient for choice, but we gather that the firm have further samples if these do not meet the wishes of their customers. The almanacks vary in size from the Universal Almanack, which is $7\frac{1}{8}\times4\frac{3}{4}$, to the purse size, $2\frac{1}{2}\times1\frac{3}{4}$. The designs are good, and those chemists who favour this method of advertising should send for samples.

Sir John Cass Institute.—The session at the Sir John Cass Technical Institute, Jewry Street, Aldgate, London, E.C., commences on September 21. The instruction is especially devoted to technical training in experimental science and in the artistic crafts, graded curricula of study, extending over several years, being provided in pure and applied chemistry and metallurgy. In addition to the more technical science work there is a full course of instruction for the B.Sc. degree of London under recognised teachers of the University. Another department of the work deals with commercial classes, including modern languages. Some of our readers may be glad to be reminded of this conveniently situated Institute.

The Confectioners' Exhibition.

THE sixteenth annual Confectioners', Bakers', and Allied Traders' Exhibition is being held this week at the Royal Agricultural Hall, Islington, London, N. The variety of goods dealt in by chemists is greater than is sold by any other tradesmen, and hence it comes about that in a walk round there may be found many exhibits of interest to those in the drug-trade. We briefly indicate some of these, and note that the Exhibition remains open till the end of the week, so that those chemists who are specially interested and have the opportunity may know that there is time to look in at the Agricultural Hall before the Exhibition closes. The Dutch section will be found well worth a visit.

Factory Machines.

There is a good deal of machinery shown, most of it being for dough-making and bread-baking purposes. Werner, Pfleiderer & Perkins, Ltd., have one of the chief exhibits, but it is entirely devoted to machinery employed for bread-making. Another similar display is that of J. Baker & Sons, Ltd. William Gardner & Sons (Gloucester), Ltd., show their "Rapid" sifters and mixers. A small sugar-grinding plant, suitable for lozenge-makers, has been produced. We have before referred to the essence-sprayer attached to one form of mixer. This has now been improved by covering the vessel containing the essence, under pressure, with wire to prevent danger if it should break. J. Harrison Carter is showing a sugar-grinding plant, but also manufactures disintegrators for drug-grinding. H. H. Hillman has a flour-mixer which is stated to be equally useful for any powder. The British Automatic Aërators, Ltd., exhibit the "Consol" aërators for soda-fountains and the newer "Consol" syphon-filler which is equally simple in use. Automatic weighing-machines are shown by Southall & Smith, and an interesting piece of apparatus is that exhibited by the Forgrove Machinery Co., Ltd., which wraps up candies in waxed paper and tinfoil. J. Defries & Sons, Ltd., are showing the Pasteur (Chamberland) filters, and also scented formalin in liquid and tablet form. Young's Patent Hygienic Bin Co. have a special bin for loaf-sugar which should be useful for such things as hypo.

Shopfittings.

Shopfittings are being shown by Parnall & Sons, Ltd., and F. E. & G. Maund, the last-named also exhibiting prismatic signs—an attractive arrangement, which does not depend upon artificial light. Cash-tills are represented by the National Cash-register Co., Ltd., and Thomas O'Brien. Several firms specialise in light delivery-trucks, such as are used by chemists for sending out syphons, H. C. Slingsby and E. & H. Hora, Ltd., being the chief. The Lamson-Paragon Supply Co., Ltd., are showing check-books and neat forms of bags for confectionery. Mansell, Hunt, Catty & Co., Ltd., and James Hunt, Ltd., specialise in carrier bags, most of the kinds having string loops at the top. Mechanical figures are shown by the Advert Co.

Food and Drink.

Edible fats other than butter are quite a feature in the Exhibition: they are employed in cake-making. Cottolene, made by the N. K. Fairbank Co.; Veltex and the Wesson cooking-oil, products of the firm of D. T. Boyd & Co.; and the Imperial butter oil of the Scottish Creameries, Ltd., are the principal kinds. There is a great number of special flours, and much variety in malt extracts and other bread-improvers. Paine & Co., Ltd., are known to chemists for their "John Bull" malt extract and powdered malt extract. This company supply the "Paco" bread-improver. Edme, Ltd., the British Diamalt Co., the British Malt Products Co., the Fiona Malt Products Co., and the United Yeast Co., Ltd., are also makers of malt extract. Other bread-improvers are "Nutteflavo" (Smith, Ward & Co.), the Haldaw brand (J. S. Halliwell & Co., Ltd.), Zymax (Brax, Ltd.), Hepoh (W. Hepworth's Exors.), Triumph (H. Thompson & Co.), and Fermentine (the Fermentine Co.). Bananas enter into the composition of the banana-bread flour sold by J. Appleby & Sons, Ltd., the speciality made with it being known as "bananine." Ekenberg dried milk is a good brand of this popular form of milk. It is made by the Ekenberg Milk Products Co., Ltd. Horlick's malted milk is being shown by Horlick's Malted Milk Co. Idris & Co., Ltd., are the sole representatives at the Exhibition of the aërated-water business, and the stand has the usual businesslike air about it. We were interested in the Nash cork, a new and simple method of corking aërated waters. No corkscrew is needed to open a bottle stoppered with the Nash cork. We also advise an inspection of the Viking food specialities, the grape jelly, calf's-foot jelly, and honey in jars being worth notice. Among the exhibitors of chocolate and confectionery may be mentioned A. J. Caley & Son., Ltd; John Mackintosh, Ltd.; Lucerna Anglo-Swiss Milk Chocolate Co., Ltd.; Halton, Ltd.; Maynards, Ltd.; and John Cleave & Son, Ltd.

Accessories.

Flavouring-essences are being exhibited by the London Essence Co. in conjunction with the Lescol Perfumery Co.; the Manchester Chemical Co.; Burton, Son & Sanders, Ltd.; E. & T. Pink; and G. T. Huband & Co. The last-named company brand their essences as "concentrol." George Morris is the chief exhibitor of colours for confectioners, the principal one being a harmless egg-yellow. Gordon & Dilworth, Ltd., have a big display of tomato catsup.

R. Hyde & Co., Ltd., are showing bird seeds and foods and iron tonic grit. "Solventem," a cockroach-destroyer, is being pushed by the American Cockroach and Black-beetle Solvent Co.; while a rat-virus is the exhibit of the Ready Rat Relief Virus Co.

The Dutch Section.

Probably the most interesting part of the Exhibition on account of its novelty is the collective exhibit of Dutch merchants in the Gilbey Hall. To Mr. H. S. J. Maas, the Consul-General for Holland in London, is due the idea of the section, and it is very successfully carried out. Many of the exhibits are of direct interest to chemists and druggists. The stands are arranged under a uniform plan, and the effect is good. Those who know the importance of the Colonial possessions of Holland will not be surprised to learn that special efforts have been made to bring the products before visitors. On one side of the hall there is a collection of Colonial products, and a booklet in English, written by Mr. P. Van der Wielen, pharmacy lecturer at Amsterdam University, is being distributed to visitors. Besides tobacco, coffee, tea, and cocoa, there are specimens of pepper, nutmegs, cloves, cinnamon, cassia, vanilla, ginger, turmeric, galangal, cardamoms, cubebs, benzoin, and chillies. We noted also cajuput and geranium oils and some fine samples of cinchona-bark. Mr. Van der Wielen's booklet gives an historical account of the early uses of cinchona, and among other interesting facts mentions that

> one Robert Talbor or Tabor, a Cambridge apothecary's assistant, had an active part in making the properties of the drug more intimately known. He made a cinchona-wine which brought him fame and fortune, for he kept its exact constituent a secret, and charged 16*s.* for a dose of it; the bark at that time (1672) costing 8*l.* per lb. He became physician to Charles II., and was knighted. A memorial in Trinity College, Cambridge, describes him as "februm malleus."

Two of the illustrations represent the cinchona sale-rooms at Amsterdam. Many of these products are exhibited by the Colonial Museum (Haarlem). W. F. Westermann (Amsterdam) makes a special feature of Banda nutmegs, and H. G. Th. Crone, of the same city, is a wholesale dealer in the Dutch Colonial produce mentioned above.

There are a few purely pharmaceutical firms exhibiting. A. M. Boom (Arnhem) is showing stomachic powder and asthma-powder. Lumay's stomachic bitters, exhibited by M. F. Goossens (Venlo), is stated to be an efficient remedy against sea-sickness. G. H. van der Wal (The Hague) shows bottles of dental tablets and coffee extract. The dental tablets effervesce when added to water to form an antiseptic mouth-wash. A. Friederich (Arnhem) also has a display of various dentifrices.

Holland being an agricultural country, with a large output

of dairy products, a good portion of the section is devoted to butter, eggs, and flour. J. Coster & Sons (Gouda) and W. H. van Hasselt (Rotterdam) show annatto and rennet. Milk powder is exhibited by Nutricia, Ltd. (Zoetermeer). C. G. van der Lee (Utrecht), J. H. Nieuwenhuys & Co. (Amsterdam), and many more firms deal in condensed milk. The Anjum Dairy "Brotherhood" (Anjum) sell a substance called Zoffmann's pure starter for ripening cream. Two infants' foods, with milk basis, are Lactitia, made by Nutricia, Ltd. (Thos. Christy & Co., Old Swan Lane, London, E.C., agents), and P. Molenaar & Co. (Westzaan); and bottled sterilised milk, "Snip" brand, is shown by the Vacca Co. (Amsterdam). Several firms exhibit rye, wheaten, or rice starch, one house—Duyvis & Co. (Utrecht)—making a speciality of starch for pharmaceutical purposes. Honey is the sole product exhibited by Hans Matthes (Breukelen), and in this connection may be mentioned the Dutch honey-cakes of Jb. Bussink (Derventer), first made in 1417, and of "De Zwaluw" Confectionery Steam Manufactory (Utrecht). Two sugar-refining firms are exhibiting, and several makers of cocoa and chocolate. P. Nieuwerkerk & Zoon (The Hague) are noted for Haagsche Hopjes (Mocha bonbons), which the firm have prepared since 1779.

G. Greve (Utrecht) shows white-lead, and Jb. Heekelaar & Zoon (Wormerveer) and Lakfabriek en Export Maatschappij (Zaandijk) make a display of paint-oils and varnishes. E. Krepel (Klarenbeek) is a maker of poplar-wood cases for Eau de Cologne, and tin boxes (decorated and embossed) are a speciality of Venn. Verwer (Krommenie). Cartoons and printing are shown by J. D. Posthumus, the Fancy & Luxe Cartonnages Manufactory (Hilversum), and Mortelman's Printing-works & Box-manufactory (The Hague). Washing-blue, stove-polish, and boot-cream are exhibited by De Societeit der Blaauselfabriek (Westzaan); while F. W. Hisschemöller & Zoon (Rotterdam) make a feature of charcoal bricks for burning in ironing and portable stoves.

Spectacle-makers' Company.

THE September examinations of this Company have been held in Glasgow this week. The Master of the Company (Mr. J. H. Davidson) was present at the opening proceedings on Monday night and addressed the candidates. He said that during his year of office a record number (520) of candidates had been examined. Mr. Davidson stated that before leaving office he hopes to secure a permanent home for the Guild and establish a reference library for the use of diplomates. The following were the concluding remarks of the Master:

The Court of my Company consider that you are under obligation to set a good example in the method of conducting your business. Encourage friendly relations with local medical practitioners and use your best endeavours to obtain and secure the confidence and support of the public. Do not forget that you will be members of the Spectacle-makers' Company—a Guild that has an unsullied record for nearly 300 years—and that you ought to protect their interests and your own by maintaining a high standard of honour and morality, and by joining with your fellow-practitioners in securing the unity of the whole optical industry. I appeal to you with the greatest confidence in the chief city of your glorious country—a country which has produced a Hume, a Burns, and a Walter Scott—and I feel certain that when the time arrives none of you will be found wanting in doing everything within your power for advancing the interests of your very valuable and important profession.

The questions set at the examination were as follows, three hours being the time allowed for each paper:

General and Visual Optics.

1. Explain by carefully drawn figures the laws of the reflection of light.

A person seated before a mirror sees a light in the room reflected from the mirror. Trace the path by which the rays reach his eye from the light.

2. Describe some method of finding the refractive index of water, and explain why an object seen below the surface of water appears less deep than it is.

3. Explain the principles that underlie the construction of an achromatic lens. How is it that the discovery of some of the modern kinds of glass has made better lenses possible?

4. Having given a convex lens of 6-in. focal length, explain how to use it to produce on a screen at right angles to its axis a real image of a lantern-slide magnified six times. At what distance from the lens will the image be?

5. You are asked to measure the power, curvatures of surface, and refractive index of a convex lens. Describe fully how this may be done.

6. What is the effect of moving a convex lens away from the eye of an emmetropic presbyope? Supposing such a person is reading a book at 15 inches distance and moves his +3 D glasses slowly away from his eyes until they touch the book: describe the changes in size which the print appears to undergo.

7. Describe the optical properties of pebble lenses. Under what circumstances are they to be preferred to glass? and *vice versâ*?

8. Where is the p.r. in myopia and hypermetropia when they can be corrected respectively by a −6 D and a +4 D lens placed at 12.5 mm. from the cornea?

9. Transpose into various possible forms, including toroidal, the following lenses, and indicate which you prefer:

(1) + 4.5 D Sph. ⊃ − 3 0 D cyl. axis 40°
(2) − 3.5 D Sph. ⊃ + 1.75 D cyl. axis 130°
(3) + 2.75 D cyl. axis 90° ⊃ 2° prism base in

10. What is the size of the retinal image of an object 12 cm. high and situated 2.5 metres from an eye which is 3.5 D hypermetropic?

Sight-testing.

1. Describe generally the structure and functions of the choroid, and indicate accurately its position and how it terminates.

2. A person obtains normal vision with the following lenses:

R + 2.5 Sph. / + 1.5 cyl. axis 90° L + 1.5 Sph. / − 0.75 cyl. axis 180°

What lenses would be necessary to just reverse the shadow at one metre distance, using a concave mirror of 20-cm. focus?

3. A myope of 20 D has his crystalline lens removed. What is the optical effect of such a procedure? and what lens would such a person require after such an operation to enable him to read at 13 inches?

4. What do you understand by latent strabismus? What methods have we of detecting same? and indicate the best methods of treatment.

5. A lens of 6-in. focal length is decentered 2.5 mm. What is the prismatic effect produced in degrees of prism angle, degrees of deviation, and prism diopters?

6. What is the refractive condition, amplitude of accommodation, and approximate age of a person in whom the p.r. with a +5.D. lens is at 50 cm. and the p.p. with a +7 D lens at 25 cm.

7. What method would you adopt to make certain whether bad vision in one eye was due to an actual defect or to malingering?

8. At what age does myopia usually begin to develop? What are the causes producing it? State the optical and hygienic measures you would adopt in treating an early case of moderate myopia.

9. A boy aged 10 years has vision 6/60, with a +3 D lens; he gets 6/6; with this lens his p.p. is at 60 cm. What is the nature of his defect? and give your reasons.

10. Explain and illustrate by diagrams the following terms:

(*a*) Visual axis.
(*b*) Optic axis.
(*c*) Nodal points.

11. What are Sansom's images? What practical use is made of them?

12. Describe a simple form of ophthalmoscope, and state what are the best curvatures for the mirrors employed.

Recent Wills.

Mr. Edwin Handford, of High Street, Great Torrington, Devon, chemist, who carried on business in that town for many years, a member of the Town Council and an alderman, and twice mayor of the borough, who died on May 6 last, aged ninety-one years, left estate valued at 4,684*l.* 4*s.* 11*d.* gross, and at 4,090*l.* 3*s.* net.

Mr. John Fuller, of Rookwood, Ealing, W., formerly in business on his own account as a chemist, afterwards manager of the Brighton and Hove Co-operatives Drug Department, and since 1880 manager of the dispensing department of the Junior Army and Navy Stores, London, who died on May 17, aged fifty-nine years, left estate valued at 3,149*l.* 7*s.* 8*d.* gross, of which 2,225*l.* 15*s.* 8*d.* is net personalty.

Legal Reports.

Trade-marks Act.

Beecham's Pills.

At Old Street Police Court on September 4, Mr. J. W. Lubbock, chemist and druggist, 52 Artillery Lane, London, E., was prosecuted for selling as "Beecham's pills" pills not made by Mr. Thomas Beecham, St. Helens, the proprietor of the trade-mark.

Mr. Margetts prosecuted, and Mr. Rudderford represented defendant. The offence was admitted, but it was pleaded that defendant had run out of Beecham's pills and had in consequence supplied a substitute. The quantity sold was a pennyworth. Mr. Biron imposed a fine of 4*l.* and 3*l.* 3*s.* costs.

At the same Court Milly Morgenstein was summoned for a similar offence, and Mr. Aarons defended. The prosecuting solicitor called evidence of purchase, and Mr. Moss, who said he "took part" in the manufacture of the pills at Beecham's, was called to say the pills supplied were not Beecham's. In cross-examination he said he was not a chemist, nor an analyst, and had no pharmaceutical or other qualification. He also said the pills sent to him to examine were handed to him from the office. He did not know where they came from, but he was sure they were not Beecham's. Mr. Aarons submitted that it was for the prosecution to trace the pills thoroughly. Witnesses were called for the defence, the defendant's assistant stating that "Beecham's" were kept in a drawer and sold four for a penny, and that he only sold from the Beecham's box. Mr. Biron fined defendant 1*l.* and 2*l.* costs.

At the Thames Police Court on September 5, Messrs. Maitland & Co., chemists, East India Dock Road, answered a similar charge. Mr. Margetts, who prosecuted, said defendant's real name was Sidney Emmes, but he traded in the name of Maitland & Co. On August 25 an agent, on behalf of Mr. Beecham, made a purchase of various goods, and asked for two-pennyworth of Beecham's pills. On examination it was found that the pills were not Beecham's. The defendant pleaded guilty, and said that he was in financial difficulties.

Mr. Chester Jones stated that as Mr. Margetts did not press for a heavy penalty he would impose a fine of 1*l.* and 3*l.* 3*s.* costs.

Sale of Food and Drugs Acts.

Lime-water.

At Clerkenwell Police Court on September 2, William Moody, Popham Road, Islington, was summoned for selling lime-water deficient in calcium hydroxide to the extent of 50 per cent. Evidence of purchase on behalf of the Islington Borough Council having been given, defendant stated that he was not a chemist but a druggists' sundriesman. He employed a chemist to make the lime-water. Mr. d'Eyncourt fined defendant 4*l.* and 12*s.* 6*d.* costs.

New Companies and Company News.

Bendle's Meat Port Syndicate, Ltd.—Capital 2,000*l.*, in 1*l.* shares. To carry on the business indicated by the title, and that of manufacturers of and dealers in medicinal preparations, drugs, wines and spirits, etc. The subscribers, who take a share each, are S. Bendle and D. I. Smith, 148 Sloane Street, S.W., wine merchants, and Lieutenant T. B. H. Thorne, 2 Harley Street, W. Private company.

Patent Specialities, Ltd.—Capital 2,000*l.*, in 1*l.* shares. To carry on the business of chemists, druggists, drysalters, oil and colour men, importers and exporters of and dealers in industrial, chemical, pharmaceutical, medicinal, and other preparations and proprietary articles, chemical and mechanical engineers and machinists, etc. The first subscribers and directors are E. Buckley, Ingleside, Buxton Road, Disley, chemical works manager; A. Robertson, Rixton New Hall, Rixton, collector; and J. A. Westbrook, 2 Kettering Road, Levenshulme, clerk. Private company. Registered office, Ingleside, Buxton Road, Disley.

Lennon, Ltd. (incorporated outside the United Kingdom). Particulars filed August 24. Capital 600,000*l.*, in 10*l.* shares (20,000 preference). Registered in Cape Colony in December 1898. Objects: To take over the business of B. G. Lennon & Co., Ltd., wholesale chemists and druggists, with the sole right to use the name of the said company and of the Natal Drug Co., and various freehold and leasehold premises in South Africa. British address, 54-58 Queen Elizabeth Street, S.E., where R. A. Fairclough and G. Needham are authorised to accept service. Directors: A. F. Revell, 25 Kensington Palace Gardens, London; A. Walsh and A. J. Rivett, of Cape Town; J. H. Carter, of Port Elizabeth; and R. Q. Leeds, of Johannesburg.

Sea Chemical Co., Ltd.—Capital 750*l.*, in 1*l.* shares. Objects: To acquire the business of manufacturing chemists and druggists carried on by J. Jeffreys and T. Hampson at Adlington, Lancs, as the "Sea Chemical Co." The first subscribers are: J. Jeffreys, Gawthorpe, Duke's Brow, Blackburn, chemist; Mrs. F. Jeffreys, Gawthorpe, Duke's Brow, Blackburn; Miss E. Windus, 7 Windle Street, St. Helens; T. Hampson, Red Rock, near Wigan, engineer; Mrs. A. Hampson, Red Rock, near Wigan; and J. Hampson, Red Rock, near Wigan. Private company. The first directors are J. Jeffreys and T. Hampson. Qualification 25*l.* Remuneration, 20*l.* per annum, divisible. Registered office, Chorley Road, Adlington, Lancs.

Messrs. Smart-Dalgleish & Co., wholesale and retail chemists and druggists, Georgetown, Demerara, British Guiana, announce that the firm has been converted into a limited-liability company for private reasons only. The capital, which is fully subscribed, is $50,000, in $100 shares.

Price's Patent Candle Co., Ltd.—The report for the six months ended June 30 last, to be presented at an extraordinary general meeting on September 11, states that the balance of profit in hand in March was 53,638*l.* The dividend of 1*l.* per share paid March 14 absorbed 37,500*l.* and the depreciation on fixed properties accounts for 10,000*l.*, leaving a balance of 6,138*l.* The profit of the six months to June 30 last was 30,335*l.* Income-tax absorbs 1,903*l.*, leaving a balance of 28,432*l.* The dividend to be declared at the meeting of 15*s.* per share will account for 28,125*l.*, leaving in hand to be carried forward 6,446*l.*

Mortgages and Charges.—Particulars of the following debentures have been registered: *Sadler & Co., Ltd.*, chemists, Middlesbrough. Issue on August 31, 1908, of 3,500*l.* debentures, part of a series of which particulars have already been filed.—The following do not refer to fresh issues, but to total amounts of mortgages and charges outstanding on July 1 and now filed according to law: *Richard Armstrong, Ltd.*, soap manufacturers, Preston. Mortgages, November 17, 1888, and August 3, 1896, securing 595*l.*—*Joseph Batson & Co., Ltd.*, oil manufacturers, Tipton. Mortgage debentures, 1895, securing 15,000*l.*—*Philip Harris & Co., Ltd.*, chemists, Birmingham. Charges, 1887, 1890, and 1897, securing in all 12,357*l.* 0*s.* 9*d.*—*W. J. Bush & Co., Ltd.*, chemists, London. Charge, April 29, 1897, securing 125,000*l.*—*Edward Gorton, Ltd.*, chemical manufacturers, Paddington, near Warrington. Mortgage, August 1, 1900, securing 1,400*l.*—*Robert Hawkshaw, Ltd.*, mineral-water manufacturers, Hull. Legal mortgage, December 1, 1902, securing 1,000*l.*—*Heywood & Massie, Ltd.*, chemical manufacturers, Frodsham. Mortgage, May 9, 1901. Amount owing on July 1, 4,106*l.* 12*s.*—*Magna Co., Ltd.*, soap boilers, Keighley. Deposit of title-deeds dated October 1907, securing 293*l.* 15*s.*—*Millbay Soap and New Patent Candle Co., Ltd.* Debentures July 4, 1899, securing 33,000*l.*—*J. J. Rigby, Ltd.*, oil refiners, Salford. First mortgage, August 1, 1901, securing 4,000*l.*—*Runcorn Bone Works, Ltd.* Mortgage, February 6, 1900, securing 6,000*l.*—*Sheppy Glue and Chemical Works, Ltd.* Amount, 8,874*l.* 15*s.* 4*d.* (no particulars filed).—*Edward Cook & Co., Ltd.*, soap makers, Bow. First mortgage debenture stock, December 30, 1898, securing 100,000*l.*

Gazette.

Partnerships Dissolved.

Eales, W., and Benson, A. N., Manchester, physicians, etc., under the style of Eales & Benson.

Jones, D. R., and Owens, J. A., manufacturing-chemists, etc., Liverpool, under the style of L. E. Thomas & Jones, The Liverpool Essence and Chemical Co., and the Liverpool Essence Co.

Reuter, A., and Murray, W., vinegar-makers, etc., Lyham Road, Brixton Hill, London, S.W., under the style of the British Vinegar Co.

The Bankruptcy Acts, 1883 and 1890.

Receiving Order.

Langley, Frank Collins, Shalimar Gardens, Acton, and Praed Street, Paddington, London, W., chemist.

Birth.

Peck.—At Halesowen, Hills Road, Cambridge, on September 5, the wife of E. Saville Peck, M.A., of a son.

Marriages.

Mason—Robertson.—At Trinity Presbyterian Church, Barrow-in-Furness, on September 3, by the Rev. William Hay, M.A., B.D., Thomas D. Mason, second son of Mr. J. Mason, Salthruse Villa, to Nina, only daughter of Mr. Charles Robertson, chemist, Barrow-in-Furness.

Thomas—Melling.—At St. Chads Church, Ladybarn, Manchester, on September 8, Edwin Thomas, chemist and druggist, Liverpool, to Etheleve Sybil, daughter of Mrs. George Albert Melling, of Withington, Manchester.

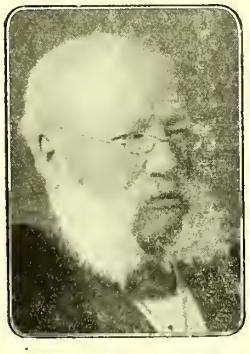
Tyrrell—Carter.—At St. Paul's Church, Blackburn, on September 7, by the Rev. J. D. Talbot, William R. G. Tyrrell, to Mary A. T. Carter, eldest daughter of the late Mr. James Carter, chemist and druggist, formerly of Bamber Bridge.

Deaths.

Alexander.—At 64 Don Street, Old Aberdeen, on September 4, Mr. John Alexander, aged ninety-six. Deceased, who was an enthusiastic astronomer, leaves a widow and one son, Mr. John Alexander, chemist and druggist, 624-626 King Street, Aberdeen.

Bently.—At 485 High Road, Tottenham, on August 29, Mr. William James Bently, chemist and druggist, aged seventy-two. Mr. Bently was registered in 1868, after passing the modified examination. He was, up to the time of his retirement a few years ago, in business at 474 High Road, Tottenham, but latterly had lived with his sister in the country. He revisited Tottenham to consult his old medical attendant, and whilst living there his illness—an incurable one—suddenly took an acute form and he succumbed. Mr. Bently's knowledge of the district extended to the time when Tottenham was an isolated village occupied by wealthy City families, and he was always fond of giving his recollections of those early days.

Deck.—At Addenbrooke's Hospital, Cambridge, on September 3, Mr Arthur Deck, pharmaceutical chemist, of Hollydene, Tenison Avenue, aged eighty-two years. Mr. Deck was closely allied with the municipal affairs of Cambridge up to the time of his retirement from business in 1906 and resignation of his seat on the Town Council, after being connected with the Corporation for forty-eight years. Mr. Deck first entered the Council in 1858, and had been an Alderman since 1877 up to the time of his retirement. He was the son of Mr. Isaiah Deck, founder of the well-known King's Parade business, by whom he was trained. He afterwards obtained experience in London, whence he was recalled to take over the family business on the death of his father in 1851. Mr. Deck passed the Major examination in 1853, his diploma being numbered 194, while his membership certificate granted the same year is numbered 2,886. On the formation of the Cambridge Pharmaceutical Association in 1893 he was chosen the first President. This office he retained for eight years, and on his retirement his fellow chemists entertained him to dinner, and presented him with an armchair, a silver drinking cup, and an illuminated address. Mr. Deck in his younger days indulged in ballooning, and up to within comparatively recent years was an ardent swimmer, but, as mentioned above, the greater part of his leisure was devoted to municipal work. It was his custom to discharge rockets at the departure of the old and the advent of the new year—an event which always attracted crowds to King's Parade on New Year's Eve. Mr. Deck was taken ill about a month ago, and was removed as a paying patient to Addenbrooke's Hospital, where he underwent an operation. Recovering from the operation, he subsequently had a relapse from which he died last Thursday. He leaves three sons and three daughters, Mr. Arthur A. Deck being his successor in business. The funeral took place on September 5, a service being first held at St. Paul's Church. The Corporation was represented, and Messrs. H. F. Cook, J. Yeomans, H. Flanders, E. H. Church, and J. Evans represented the Cambridge Pharmaceutical Association. The Association also sent a beautiful wreath, and there was one from Mr. Horace Coulson, an old apprentice.



Dorman.—At Uppingham on August 27, Mr. James Gilbert (Bertie) Dorman, aged nineteen. Mr. Dorman was apprenticed with Mr. C. Bayley, chemist and druggist, Uppingham, and died as a result of a cycle accident. He was a bright and promising youth.

Greig.—At 202 Renfrew Street, Garnethill, on September 2, Sarah Craig, wife of the late William Greig, of the New Apothecaries' Co., Glassford Street, aged ninety-three.

Hambrook.—At Stroud Street, Dover, on September 6, Mrs. Hambrook, the wife of Mr. Edward O. Hambrook, aged forty years. Mrs. Hambrook had been ill for a long time. The funeral took place on Wednesday.

Jamie.—At Serangoon House, Craiglockhart, Slateford, N.B., on September 3, Mr. Robert Jamie, chemist and druggist, late of Singapore. Mr. Jamie served his apprenticeship to the late Mr. Henry C. Baildon, pharmaceutical chemist, Edinburgh, and passed the Minor examination at the first examination held in Edinburgh—February 24, 1852. Mr. Jamie was appointed, on Mr. Baildon's recommendation, to be manager of the Dispensary, Singapore, where he remained for over quarter of a century, and retired early in the 'eighties with a competency. Since then he had lived at Slateford. While in the East Mr. Jamie was of great service to pharmacognosists. It was he who obtained for the late Daniel Hanbury the materials which enabled him in 1864 to identify the true source of gamboge, *Garcinia Hanburii*. Mr. Jamie presented a number of interesting specimens of materia medica to the North British Branch Museum, and contributed papers in 1874 on champaka-flowers and other Singapore drugs. Mr. Jamie was a quiet and unassuming man.

Mackay.—At Bridge of Earn, Perthshire, on September 2, of heart failure, Mr. William Bailey Mackay, of John Mackay & Co., Ltd., wholesale druggists, Edinburgh. Mr. Mackay was a son of the late John Mackay, who was long and prominently identified with pharmacy in Scotland. Mr. William Mackay represented his company in Scotland and the North of England for many years, and was well known to most chemists in these districts. Latterly he had to give up his journeys owing to poor health, but to the last took a great interest in the trade.

Pickavant.—At 4 Chestnut Street, Southport, on September 7, Mr. Henry Pickavant, chemist and druggist, aged thirty-two. Mr. Pickavant had suffered from influenza, and while temporarily insane cut his throat, from the effects of which he died a few days afterwards. He was in business at Richmond Hill, Surrey, and at the inquest a letter was read from his old employer, Mr. George Harris,, who referred to deceased's excellent business qualifications.

Turton.—At Leeds, Mr. Walter Turton, son of Mr. J. W. Turton, chemist, 102 Meadow Lane. Deceased, who assisted in his father's business, was found drowned in Roundhay Park Lake. He had been depressed lately since an injury to his head.

Widdowson.—At 44 Loughborough Road, West Bridgford, Notts, on September 1, Alice, daughter of Mr. Reuben Widdowson, chemist and druggist.

The first steps are being taken by an Agricultural Commission in South China for the development of the camphor industry.

Association Affairs.

Halifax Chemists' Association.

A MEETING of this Association was held this week at the Old Cock Hotel. There were present Mr. W. E. Smithies (President), and Messrs. Gibson Dixon, W. R. Black, W. F. Murrell, J. W. Tiffany, W. R. Fielding, W. S. Thompson, and P. W. Swire (Secretary). Mr. J. E. Binns (Sowerby Bridge) was elected a member, and then a long discussion of prices took place.

Aberdeen Pharmaceutical Association.

THE QUARTERLY MEETING of this Association was held in Robert Gordon's College this week, Mr. James Spence (President) in the chair.

THE POISONS AND PHARMACY BILL was the principal subject of discussion, on a report of the committee appointed to formulate some amendments to the Bill embodying the Association's objection to the measure. Mr. Spence, convener, in proposing the adoption of the report, said that it was necessary for the trade to take a firm stand in opposing some of the principles underlying the measure. He considered that, unless some better security is given than is at present in the Bill, it is more than likely that very soon chemists will have to fight for the professional title of pharmacist in the same way as they are now fighting for the title of chemist and druggist. Considerable discussion took place on the report, all agreeing that the most retrograde action the Government proposed to take was the principle embodied in Clause 2. The report was approved and again remitted to the committee.

SUNDAY HOURS claimed the attention of the members, and it was agreed that further efforts should be made to come to some understanding in the different districts as to the hours of keeping open on Sunday evenings.

Dover Chemists' Association.

A MEETING was held at the Metropole Hotel, Dover, on September 3, Mr. J. F. Brown in the chair. There were also present Messrs. R. Ewell (Secretary), A. H. Cartwright, J. H. Cuff, A. C. King, E. O. Hambrook, G. F. Fowler, and F. Grover.

The first business was to extend a welcome to the new member of the Association, Mr. J. Harcombe Cuff, who suitably replied.

An invitation from the Thanet Association to a meeting to be held at Margate on September 10 was received. The President and Mr. Cuff intimated that they would be present.

POISONS AND PHARMACY BILL.—An animated discussion on this Bill was then commenced, in which the members freely joined, but few new points were brought forward. The President pointed out that, although this Bill attempted to legislate for companies and for qualified men, there was very little or no improvement in the law enabling the Pharmaceutical Society to prosecute unqualified men.

The meeting closed without any definite resolution owing to the lateness of the hour.

Grimsby Chemists' and Druggists' Association.

A MEETING of this Association was held on September 7 at Walton's Temperance Hotel. There were present Messrs. Cor. Willson (President), Ashton, Boor, Johnson, Robinson, Sneath, Oliver, and the Hon. Secretaries (C. N. Chapman and F. W. Heely).

It was arranged to have an excursion to Lincoln on September 10, on the invitation of the Lincoln Chemists' Association.

THE TERRITORIAL ARMY.—Mr. Chapman read a letter from Surgeon-Major L. W. Pockett, M.D., asking him to bring the Territorial Cavalry Ambulance Corps before the meeting, and stating that if any would care to join he would be pleased to give full particulars. After some discussion the following resolution was passed and ordered to be forwarded to Surgeon-Major Pockett:

> That the Grimsby Chemists' Association acknowledge the letter of Dr. Pockett, and suggest that it be a condition that qualified chemists should rank as non-commissioned officers on joining the corps.

It was also resolved that a deputation wait on Dr. Pockett with the above resolution and report the result at the next meeting.

It was resolved that the Secretaries convene a special meeting to discuss the Government Poisons and Pharmacy Bill.

British Pharmaceutical Conference.

THE arrangements for the reception of the members of the Conference are now practically complete. The proceedings open by a reception on Monday evening at the Municipal Art Galleries by the Lord Provost, Sir Alexander Lyon. The sessions of Conference are to be held in the Marischal College, and begin at 9.30 on Tuesday morning. For the benefit of those members who were not present at Manchester it should be noted that the arrangement of one session a day, which was inaugurated last year, will be continued. The afternoon is to be devoted to an outing to the Rubislaw Granite Quarries, and in the evening a concert and dance will take place in the Mitchell Hall of the Marischal College. On Wednesday the session begins at the same time. The closing proceedings are to conclude in time for the members to leave the Joint Station at 3.50 P.M. for Muchalls. In the evening there will be an impromptu concert in the Headquarters Hotel. The all-day excursion on Thursday is to Braemar—by train to Ballater, and thence by coach. The train leave Aberdeen at 8.45 A.M.

"No half-measures at Aberdeen," writes a correspondent, who calls our attention to the times printed on the dance-ticket for Tuesday night—10.30 P.M. to 2 P.M. Even at 2 A.M. the dancers will probably have had full measure.

The Federation of Local Pharmaceutical Associations is to meet at the Grand Hotel on Friday, September 18, at 9.30 A.M. Mr. Edmund Jones (Hanley) is the new Hon. Secretary.

Business Changes.

Properly authenticated business notices (not being advertisements) are inserted in this section free of charge if promptly communicated to the Editor.

THE Doncaster Co-operative Society has opened a chemist's department at Woodlands.

MR. A. B. CALVERT, chemist and druggist, has recently removed from 48 Waterloo Street to Princes Avenue, Hull.

MISS GRACE J. RENNIE, chemist and druggist, has purchased the business of Messrs. Hall & Rundle, 8 George Street, Bath.

THE business formerly owned by Mr. L. Forth, druggist, North Queen Street, Belfast, has been taken over by Mr. Moore Wilkinson, registered druggist.

MR. GEO. WALKER, 136 Sandy Row, Belfast, has disposed of his business to Mr. W. Reid, of Messrs. W. Dobbin & Co. Mr. Walker still retains his business at Strandmillis Road.

MR. W. H. SMITH, chemist and druggist, 3 Egginton Street, Leicester, has disposed of his business to Mr. F. T. Wilby, chemist and druggist, Humberstone Road, Leicester.

MR. A. H. CARPENTER, chemist and druggist, who recently disposed of his business at Streatham, has opened a neat, up-to-date pharmacy in the Arcade, Mincing Lane House, Mincing Lane, London, E.C.

THE business formerly carried on by Mr. G. H. Waugh, druggist, 132 Grosvenor Road, Belfast, will be reopened shortly by Mr. A. D. McMurray, will will trade under the name of the Grosvenor Medical Hall.

MESSRS. W. H. MCMULLEN & Co. have purchased the Medical Halls, Main Street and Dunluce Street, Larne, from Messrs. J. A. Bingham & Co. These businesses are now under the management of Mr. W. H. McMullen, L.P.S.I. Mr. McMullen was apprenticed with Mr. J. P. Parke, pharmaceutical chemist, Banbridge, and has since had experience at Worthing and in Dublin.

Bengal Government Cinchona and Quinine.

THE annual report of the Bengal Government cinchona plantation and factory, British Sikkim, for 1907-8 states that the total number of cinchona trees of all kinds on March 31, 1903, was 3,471,216. Of this number 2,779,746 were Ledgeriana, the remainder consisting of 346,699 hybrid (No. 1), 92,992 hybrid (No. 2), and 251,779 succirubra. The decrease in the number of trees on the plantations as a whole since last year is 227,561 plants. Cultivation has been but moderately maintained in the headquarters division. The use of bonemeal was discontinued, the result not being sufficient to justify a continuation of expenditure. Mortality continues very high among the Ledger trees, and the current season will show a further and marked decrease. The bark-harvest for the year amounted to 445,638 lb., an increase of 16,031 lb. Of this total 419,388 lb. were Ledgeriana, 407 lb. succirubra, and 25,000 lb. hybrid. The total quantity of bark worked up in the factory was 945,900 lb., of which 764,954 lb. was Ledgeriana. The output of quinine sulphate was 27,564 lb., being an increase of 11,499 lb., or 71.57 per cent. on last year's output, and the largest quantity ever turned out by the factory in one year. This is in part due to new machinery, but principally to the new method of working, by which each vat produces double the amount it did previously. Only 3,370 lb. of cinchona febrifuge was produced, but this was sufficient to leave a stock in hand of 1,843 lb., and with a greater demand far more could be produced. No cinchonidine sulphate was manufactured during the year, there being an ample quantity in stock to meet the limited demand. The average yield of quinine sulphate from the bark used in the factory was 2.90 per cent., a difference of 8.2 per cent. from last year's figures. These low figures will not occur in future years, for the whole of the accumulation of old and poor bark has now been worked up, and only the bark now being produced or bought will be available. The yield at the end of the year had risen to 3.34 per cent., and should rise still further, while in the course of a few years bark from the selected trees should be coming in, and a normal yield of 6 or 7 per cent. be obtained. The factory officers have analyzed 546 samples of bark, while work for the improvement of the factory is constantly going on.

The charges against the Department amount to Rs. 21,834, as against Rs. 48,104 charged last year. The total plantation charges amount to Rs. 90,715, of which the sum of Rs. 64,461 was incurred for Mungpoo plantation and Rs. 26,253 for Munsong. Against the total plantation charges has to be placed the yield of 445,638 lb. of bark, valued at Rs. 89,567. The working-expenses of the factory were Rs. 90,408, being Rs. 81,983 incurred in the manufacture of sulphate of quinine and Rs. 8,425 in making cinchona febrifuge. The value of the bark put through the factory was Rs. 1,85,788.

The amount of quinine sulphate sold was 16,957 lb., being 1,176 lb. in excess of last year. The Medical Depôt, Lahore Cantonment, took 2,500 lb., the Inspector-General of Prisons, Bengal, for pice packets 600 lb., the Superintendent, Central Prisons, Lahore, 30 lb., and the Superintendent, District Gaol, Bannu, 27 lb. more than in the previous year. On the other hand, the Medical Depôt, Calcutta, the Inspector-General of Prisons, Bengal, for gaols and lock-ups, and the Government officers and dispensaries, etc., took respectively 500 lb., 12 lb., and 998 lb. less than they did in 1906-7. The Inspector-General of Civil Hospitals, Eastern Bengal and Assam, took 25 lb. of sulphate of quinine during the year. Of cinchona febrifuge 3,339 lb. was sold, showing a decrease of 530 lb. over last year. The Medical Depôt, Lahore Cantonment, on the other hand, took 200 lb. more than in the preceding year.

The total receipts amount to Rs. 2,23,681, being Rs. 11,410 more than last year's receipts and Rs. 20,722 more than the year's expenditure. The total Budget grant for the year was Rs. 2,31,131. On March 31, 1908, there were in stock 14,346 lb. of sulphate of quinine, valued at Rs. 1,53,778; 762 lb. of sulphate of cinchonidine, valued at Rs. 8,572; 1,843 lb. of cinchona febrifuge, valued at Rs. 13,822; 14,925 lb. of amorphous alkaloids, valued at Rs. 13,059; 409,119 lb. of cinchona, valued at Rs. 81,033; 12,285 gals. of oil, valued at Rs. 9,151; 175,062 lb. of chemicals, valued at Rs. 14,688; and sundry stores, valued at Rs. 5,649. The total value is Rs. 2,99,757, taken at the average rate at which such stock was sold during the year. The profit on the year's working is Rs. 52,967, or, deducting non-recurrent charges, Rs. 44,127. The quantity of sulphate of quinine issued to the Prisons Department for conversion into pice packets during the year was 4,000 lb., being an increase of 600 lb. over last year's issue.

The Photographic Salon.

AT the gallery of the Royal Society of Painters in Water-colours, and in a well-lighted room, the walls of which are covered with grey canvas, the Photographic Salon is holding its sixteenth annual exhibition. The members of the Linked Ring regard photography as art, and the works on view this year, though carried out in almost all known methods except silver-printing, appeal to one from the artistic rather than the scientific standpoint. Several years ago the more subtle-minded photographers felt that there was something higher to be aimed at than the mere rendering of detail, and it became apparent from studying the masters of painting that while detail is often useful, it is by no means essential; mass and tone were found to be the important elements in a picture. From a recognition of that fact comes much that is good in modern photographic work; but there are at the Salon some examples which can hardly be called other than grotesque.

In the works exhibited one is impressed with the high standard which portraiture has reached. Demachy, whose oil process has been described in the *C. & D.*, has gone beyond the limits of photography pure and simple, and in his portraits the entire surface is covered with pigmentation. The result is decidedly artistic. No. 15, "A Head," resembles at a little distance a clever drawing in black and white.

Other portraits of a more decidedly photographic character include a splendid head, full of modelling, telling up well against a dark background, No. 109, by J. Craig Annan; and a portrait group, by the same artist, of two children plucking flowers, entitled "Sunshine and Flowers," is very pleasing.

Of large portraits one of the painter Favai, by Baron de Meyer, is very successful: rugged in effect, yet subtle in tones. The same exhibitor shows some good studies of still life in which glass is well rendered. Other portraits that should be noted are No. 95, "Miss Beatty," by Clarence H. White; No. 71 and No. 73, by Edward J. Steichen; and No. 74.

Alvin Langdon Coburn, who is recognised as a master by the Ring, has some views of London in his well-known style, which are worth seeing. No. 34, a topical subject, the Court of Honour at the Franco-British Exhibition, is a good example of discriminating treatment. No. 40 is a clever effect of fireworks, the light of the rockets being quite vivid green.

Just inside the door, on the left, are some interesting industrial subjects by Malcolm Arbuthnot, No. 4, "The Topsail Yard," being a good picture of sailors on a yard-arm. Of the smaller works there are several which are worth close inspection.

The centre of the room is taken up by some autochrome colour-photographs. Technically they form the most interesting part of the exhibit. This method gives excellent results in the hands of a skilful manipulator, the most satisfactory being studies of still life.

New South Wales Bismuth.—The production of bismuth metal and ore in New South Wales during 1907 amounted to 16 tons, valued at 5,263*l.*, against 25 tons, valued at 5,700*l.*, in 1906.

New South Wales Platinum.—The production of platinum in New South Wales during 1907 amounted to 276 oz., valued at 1,014*l.*, against 205 oz., valued at 623*l.*, in the preceding year.

Trade Report.

NOTICE TO BUYERS.—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C., September 10.

THERE are indications of a slight improvement in business in several directions, and the fact that the United States has placed more orders lately on this market is looked upon as a sign that consumptive buying cannot be much longer delayed. Otherwise changes in value are few. Cascara sagrada shows an advancing tendency. Cape aloes, buchu, cardamoms, and Tinnevelly senna sold well at auction at higher rates. Grey Jamaica sarsaparilla, Madagascar beeswax and areca were easier. Privately, other fluctuations include an advance in Jamaica honey, and a decline in chamomiles, lemon, French lavender, bergamot, peach-kernel and castor oils. Shellac is lower and quicksilver is very firm. The chief alterations are as follows :

Higher	Firmer	Easier	Lower
Aloes (Cape)	Canary seed (c.i.f. terms)	Ammonia sulphate	Bergamot oil (c.i.f.)
Buchu	Green copperas	Areca	Chamomiles
Cardamoms		Arrowroot	Lavender oil (French)
Cascara sagrada		Castor oil	Lemon oil (c.i.f.)
Honey (Jamaica)		Sarsaparilla (grey)	Peach-kernel oil (so-called)
Senna (Tinn.)		Shellac	
		Wax, bees (Madag.)	

Cablegrams.

Smyrna, September 10 :—The sales of opium amount to twenty cases ; there are now buyers at from 13*s.* 9*d.* to 15*s.* per lb., but sellers are few.

New York, September 9 :—Business in drugs is quiet. Opium is weak at $5 per lb. for druggists' by single cases. Peppermint oil in tins is steady at $1.45 per lb. Spearmint oil is declining, $3 per lb. now being quoted. Guarana is lower at $2.50 per lb. Hydrastis (golden seal) is firm at $2, and cascara sagrada is ½c. per lb. higher at 9½c.

Heavy Chemicals.

Although business in the heavy-chemical market can hardly be described as being other than on the quiet side, there nevertheless seems to be a somewhat greater activity at some of the centres of the industry, and, generally speaking, the market is steady. Values are maintained without material fluctuation and without tendency towards decline.

Bichromates of Potash and Soda are on the quiet side, since various consuming trades are only slack. Bichromate of potash, English and Scotch deliveries, 3½*d.* per lb., less 10 per cent., and export 3¼*d.* per lb. net f.o.b. Glasgow. Bichromate of soda, English and Scotch deliveries, 3*d.* per lb., less 10 per cent., and export 2¾*d.* per lb. net f.o.b. Glasgow.

Sulphate of Ammonia.—This market is quiet, and with the increasing production now coming on to the market prices are somewhat in buyers' favour. Business for next year's delivery is practically at a standstill, since buyers refuse to pay the higher figures asked. Present nearest figures are: Beckton, September-December, 11*l.* 17*s.* 6*d.* to 12*l.*; Beckton terms, 11*l.* 5*s.* to 11*l.* 6*s.* 3*d.*; London, 11*l.* 5*s.* to 11*l.* 6*s.* 3*d.*; Leith, 11*l.* 12*s.* 6*d.*, with January to June delivery 12*l.* to 12*l.* 5*s.*, and Hull 11*l.* 5*s.*

Potash Salts are in fair request at generally unchanged rates. Carbonate, 90 per cent. 17*l.* 15*s.* to 18*l.* 15*s.*, and 96 to 98 per cent. 24*l.* 10*s.* to 25*l.* 5*s.* per ton; caustic potash, 90 per cent. 24*l.* to 24*l.* 5*s.*, and 75 to 80 per cent. 20*l.* 10*s.* to 21*l.* Sulphate, 90 per cent., 9*l.* 5*s.* to 9*l.* 10*s.* Muriate, 80 per cent., 8*l.* 15*s.* to 9*l.* Saltpetre, refined barrels 23*l.* 15*s.* to 24*l.*, and kegs 24*l.* 5*s.* to 25*l.* Permanganate, 36*l.* to 36*l.* 10*s.*

Green Copperas is in continued good request, and being somewhat scarce prices are firmer again. Best Lancashire makes 50*s.* to 52*s.* 6*d.* per ton f.o.b. Liverpool, and Welsh 17*s.* 6*d.* to 20*s.* per ton in bulk free on rails.

Recovered Sulphur steady and in good inquiry, with price 5*l.* to 5*l.* 5*s.* per ton free on rails in bags.

Superphosphates of Lime are in average request at 47*s.* 6*d.* to 52*s.* 6*d.* per ton f.o.r. or f.o.b. on the basis of 26 per cent., and with unchanged extras for higher strengths.

Manchester Chemical-market.

Manchester, September 8.

Although trade is depressed generally there is a fair home demand for most chemicals, with prices well maintained. Sulphate of copper is, however, in limited demand, but in face of advancing prices for the raw material sellers are indifferent. Most acids are easier and demand small. White powdered arsenic rather scarce on spot, and tending upwards. Lead salts in buyers' favour. Farinas quiet. Sizing flour 6*d.* per sack higher. Ammonia muriate, 24*l.* per ton; sulphate of ammonia, 11*l.* 2*s.* 6*d.* to 11*l.* 5*d.* per ton, rails Manchester. Acids: Arsenic, 2,000°, 26*s.* 6*d.*; glacial acetic, 35*s.* to 37*s.* 6*d.* per cwt.; sulphuric (free from arsenic), 145°, 36*s.* per ton. Aniline oil, 5½*d.*; salts, 5*d.* per lb. Chloride of barium (refined crystals), 7*l.* 10*s.* per ton. Barytes (refined white), 32*s.* 6*d.* to 35*s.*; grey, 35*s.* to 37*s.* 6*d.* per ton. Carbolic acid, 39° to 40° C., crystals, 4¾*d.*; 34° to 35° C., 4¼*d.*; crude 50's, East Coast 1*s.* 3*d.* to 1*s.* 3½*d.*, West Coast 1*s.* 2*d.* to 1*s.* 2¾*d.* Carbide of calcium (for acetylene-gas manufacture), 12*l.* to 14*l.* 10*s.* per ton; sulphate of iron (green copperas), 45*s.* to 47*s.* 6*d.*, f.o.b. Manchester Ship Canal. Bleaching-powder, 4*l.* 5*s.* to 4*l.* 10*s.* per ton, softwood casks, on rails at works. Glycerin (chemically pure, in tins and cases), 65*l.* to 66*l.*; 5-cwt. drums, 61*l.* per ton. Foreign white sugar of lead, 23*l.* 10*s.*; grey, 20*l.* 10*s.* to 21*l.*; nitrate, 24*l.*; acetate, 23*l.* per ton. Methylated spirit (61 o.p.), 1*s.* 8*d.* per gal. Naphthalene, 4*l.* 10*s.* to 8*l.* 10*s.*; salts, 30*s.* to 35*s.* per ton. Manganese, 94-per-cent., 30*l.* to 32*l.*; 80 to 85 per cent., 7*l.*; 70-per-cent., 6*l.* 15*s.*; 60-per-cent., 5*l.* 15*s.* per ton. Potash carbonate, 90-per-cent., 17*l.* 10*s.*; caustic, 87 to 90 per cent., 23*l.* 10*s.* per ton; chlorate, 3½*d.* per lb. Glauber salts, 42*s.* 6*d.*, f.o.r. Sulphate of magnesia (Epsom salts), 60*s.* per ton bags, and 70*s.* to 85*s.* per ton, casks and barrels, for export, according to quality; cyanide of potassium, 8¾*d.* per lb. Verdigris (English), 9*d.* per lb. White powdered arsenic, 16*l.* 10*s.* to 17*l.* per ton. Sulphate of copper, 22*l.* 10*s.* per ton, best brands, delivered Manchester. Sub-oxide of copper (commercial powder), black, 10¾*d.*; red, 11*d.* per lb.

Continental Drug and Chemical Markets.

Agar-agar.—High prices are still maintained for strip, especially for good white quality, which realises 375m. to 385m. per 100 kilos. in transit ex Hamburg.

Aluminium.—In consequence of the competition which has recently become apparent, the Aluminium Convention, which has existed since 1901, is about to be dissolved.

Camphor (Refined).—Japanese raw material is again somewhat cheaper, and consequently prices for refined camphor in bells are slightly lower. Second-hand dealers especially are trying to dispose of their supplies, as future developments are uncertain. Refined should now be obtainable at 435m. to 440m. per 100 kilos. in Hamburg.

Cantharides.—Offers of Russian cantharides are frequent, so the crop has evidently turned out favourably. Quotations are from 525m. to 550m. There are still several cases of Chinese flies on the market, but in spite of the low price of 275m. per 100 kilos. there are no buyers.

Citric Acid.—Business is restricted to current obligations, and there are few new orders, as the future position of the market is still very uncertain.

Ergot.—There have been very few offers, and it was thought that this indicated a small crop this year. In reality the Russian crop falls very late, so that reports as to the result would appear premature. At present there is a scarcity, and in these circumstances the high prices which obtain—210m. to 225m. per 100 kilos.—are justified.

Juniper-berries.—The numerous offers of this product would seem to indicate that supplies in Italy are still very considerable. The last crop was by no means too large, but the demand left much to be desired. The available local (Hamburg) stock is being disposed of at somewhat lower prices, in view of the arrival of fresh supplies in October.

Menthol.—Although business is very quiet, quotations are at 16.50m. per kilo. in consequence of the higher prices asked in Japan.

Oxalic Acid.—In consequence of inadequate demand oxalic acid is offered at a price which can admit of no profit for the dealers. Business for next year's delivery will develop along totally different lines, and the fact that a lower basis price on the part of the makers may be reckoned upon with some degree of certainty tends to promote lower prices.

Sandarac.—The disturbances in Morocco were bound to

affect this product, and although prices show a tendency to advance there has been no decrease in business, and a fair quantity has been disposed of. Quotations for the natural product are up to 140m. per 100 kilos., and it is probable that this value will be maintained.

STYRAX.—Offers from the producing centres for styrax from the new crop have recently been made at very low prices, and this has naturally affected the value of Hamburg stocks. Styrax in casks is obtainable at about 110m. per 100 kilos., and the tendency of the market is weak.

German Bromides.

A writer in the "Berliner Tageblatt" states that there is no improvement in the trade in bromides, the position of the market being, if anything, still weaker owing to competition from the United States. Both the German Conventions, the Bromine Convention, and the Bromide-preparations Convention are obliged, in order to fight against American competition in Germany, to reduce the price of bromine and its preparations to such an extent as to leave practically no margin for profit to the producers and manufacturers. The demand is good, but this does not help matters when the price-level is so low. Export trade with the United States is almost entirely abandoned. Last year Germany exported large quantities to America at "cut" prices, but did not succeed in ousting American competitors from the market. Now these methods have been given up, and an amicable agreement is hoped for. This would be more easily obtainable if there were formal conventions in the United States similar to those which exist in Germany. Then there would be a central bureau through which matters could be negotiated. At present there is no hope of an improvement in the trade.

The Shellac Failure.

Messrs. Rogers & Pyatt, shellac merchants, New York, whose affairs are under investigation, have issued a statement pointing out that the condition of the business is not at all alarming. The present situation, they say, is the result of general business depression and to a very large depreciation in the value of stock on hand; they also state that almost $200,000 of the company's available surplus has been recently invested in a factory building and machinery. The receivership was decided upon by creditors representing approximately three-fourths of the company's indebtedness, and was co-operated in by the company as the best method of working out the assets for the benefit of all. The books, they say, disclose a large number of very profitable orders, which the receivers are proceeding to fill immediately. In view of the statement made to the effect that the receivership was for the purpose of closing out the business, the firm point out that the decree of the Court providing that the business should not be conducted by them for more than thirty days without further order was limited in this way, as the Judge expressly stated, with the idea that at the end of this period they should file with him a statement of the month's business, and that, if this statement showed the business to have been conducted with profit, the authority to continue the conduct of the business would be extended pending a reorganisation. The receivers will be able before long to give the creditors an accurate statement of the condition of the company. A similar explanatory circular has been sent to the customers of the firm.

ACID, CITRIC.—Quiet, with English nominal at 1*s.* 4*d.* and foreign at 1*s.* 3¼*d.* per lb.

ACID, TARTARIC, is steady but quiet at 10½*d.* per lb. for foreign and 10¾*d.* for English.

ANISEED.—The market is steady. Old crop Russian is offering at 19*s.* to 20*s.* per cwt. on the spot, and new is quoted 21*s.* c.i.f. terms. In the drug-auction 7 bags of ordinary Russian were limited at 19*s.*

ARROWROOT.—Easier. At auction 182 barrels St. Vincent offered, and 55 sold at 1⅞*d.* to 2⅛*d.* per lb.

BALSAM, CANADA.—The higher price of 3*s.* per lb. c.i.f. is cabled from New York.

BELLADONNA-ROOT.—The spot market is bare, and for shipment, prices range from 55*s.* to 65*s.* per cwt. c.i.f., the lower quotation being for inferior.

CALUMBA.—There seems to be little on offer at the moment. In small parcels fair clean natural sorts are offered at from 16*s.* to 18*s.*, common washed sorts at 20*s.*, and medium washed picked at 32*s.* 6*d.* per cwt.

CANARY-SEED is very quiet on the spot, but Turkish for shipment is firmer, 30*s.* 6*d.* per quarter c.i.f. terms being now asked.

CARAWAY-SEED is steady at 38*s.* to 40*s.* 6*d.* per cwt. on the spot for common to fine Dutch. The price f.o.b. Holland is 38*s.* for fair quality.

CHAMOMILES.—Quotations are again lower, agents offering at 49*s.* per cwt. c.i.f. for best Belgian, while No. 2 and No. 3 are quoted at 42*s.* 6*d.* and 47*s.* 6*d.* respectively. It must be stated, however, that although prices are lower quality is also depreciating. In another week or two it is anticipated the crop will be at an end, after which prices are expected to improve.

CHILLIES.—Slow. Thirty bags fine bright Japan were bought in at 55*s.*, and 300 bags Mombasa at 27*s.* to 29*s.* Sales privately of Mombasa have been made at 28*s.*

CINNAMON.—Eighty-one bags offered and 14 sold at 6*d.* for broken quill; wild bark was bought in at 2*d.* per lb.

CLOVES.—At auction 145 bales Zanzibar were offered, of which 30 sold at from 4½*d.* to 4 7/16*d.* for fair. Privately small sales of dullish to fair have been made at from 4⅜*d.* to 4½*d.* per lb. The delivery market has been quiet but firm, sellers being few, closing buyers on Wednesday at 4 31/32*d.* for January-March; sales for August-October shipment have been made at 4 5/16*d.* per lb. c.i.f., and September-November at 4 7/16*d.*, closing buyers of January-March at 4 9/16*d.* c.i.f.

COPPER SULPHATE.—In Liverpool, good brands offer at 19*l.* 15*s.* per ton for September-December delivery, and at 20*l.* 10*s.* for January-April. Spot appears to be nominal.

CORIANDER-SEED is quiet; fair quality Morocco has been sold at 12*s.* 6*d.* per cwt. on the spot. In auction 44 bags Russian were held at 14*s.* 6*d.*

CREAM OF TARTAR is steady at last week's reduction, the value of 99 per cent. to 100 per cent. powder being 78*s.*, 98 per cent. 76*s.*, and 95 per cent. 74*s.* per cwt.

CUMIN-SEED.—Morocco is scarce, and the price required is 45*s.* to 47*s.* 6*d.* per cwt. for ordinary to good sifted. Malta is offering at 42*s.* 6*d.* to 45*s.*, and East Indian at 35*s.* per cwt.

FENUGREEK-SEED.—The price for retail lots of Morocco is 10*s.* 6*d.* per cwt., but for larger quantities 10*s.* would be accepted.

GAMBIER.—Cubes on the spot are steady at 33*s.* per cwt., and for arrival sales have been made at 30*s.* 6*d.* ex quay, September-October.

GINGER.—Slow. One hundred bags wormy Cochin washed offered and sold, without reserve, at 30*s.* Japan was steady. Fifty-three bags offered and 13 sold, comprising small limed, slightly mouldy, at 28*s.* Jamaica in slow demand at auction, with small sales. Better qualities were about 2*s.* cheaper, but common brought previous prices; 481 barrels and 95 bags offered, and about 60 packages sold; good to fine at 65*s.* to 72*s.*, middling to fair at 57*s.* to 63*s.*, and ordinary to good ordinary at 53*s.* to 55*s.* per cwt.

LINSEED is firm at 46*s.* 6*d.* to 52*s.* per quarter for ordinary to fine quality.

MENTHOL is steady, with small sales of Kobayashi at from 7*s.* 1½*d.* to 7*s.* 3*d.* per lb. spot, the higher prices being for single cases. Arrival prices do not permit of business.

MORPHINE.—The demand continues steady on the basis of 7*s.* 3*d.* for small lots of hydrochloride powder.

OIL, ANISEED, STAR, is steady on the spot, with small sales at from 4*s.* 6*d.* to 4*s.* 7*d.* per lb. as to quantity, and for shipment 4*s.* 6*d.* c.i.f. is quoted.

OIL, APRICOT KERNEL, or so-called peach-kernel oil, has been reduced by the English pressers by 2*d.* per lb. to 1*s.* 2*d.* net in 1-cwt. lots. The new crops of almonds are arriving more freely, and this enables the price-reduction.

OIL, BERGAMOT.—The new crop is lower for forward delivery at 11*s.* 6*d.* per lb., but on the spot, prices are maintained at 14*s.* for 37 per cent. to 38 per cent. esters.

OIL, CASTOR, is lower. Hull make is quoted at 23*s.* 5*d.* per ton for first pressing in barrels for prompt, and at 23*l.* 10*s.* for October-December, ex wharf London. Cases are 50*s.* per ton extra. Holders in Liverpool quote 2⅞*d.* per lb. for good seconds Calcutta, and 3⅛*d.* nominally for first pressing French.

OIL, CITRONELLA, is unaltered from 1*s.* to 1*s.* 1*d.* per lb. spot for Ceylon.

Oil, Cod-liver.—Business recently has been quite of a retail description on the spot; but from Norway advices come to hand that the inquiry has improved, buyers sounding the market in view of the winter demand; finest brands of Lofoten oil are offered at 57*s.* to 58*s.* per barrel c.i.f. Our Bergen correspondent reports that the quotation for finest Lofoten cod-liver oil is unchanged at from 52*s.* to 53*s.* per barrel f.o.b. Bergen, but that business is only small. The exports from Bergen up to date amount to 13,478 barrels, against 8,408 barrels at the corresponding date of last year.

Oil, Eucalyptus, in fair demand. Oil analysing 60 per cent. cineol is obtainable at 1*s.* 1*d.*, globulus at 1*s.* 3½*d.*, and Amygdalina at 8½*d.* per lb., which prices might be shaded for round lots.

Oil, Lavender.—As was anticipated, the new crop of French lavender is now available at lower prices, importers offering at from 7*s.* 3*d.* to 7*s.* 6*d.* per lb.

Oil, Lemon.—New crop for October to January delivery is offered from Messina at the lower range of from 3*s.* 1*d.* to 3*s.* 3*d.* per lb. c.i.f. terms, but on the spot, prices are steady at from 3*s.* 9*d.* to 4*s.* per lb.

Oil, Orange.—Sweet is quoted at 6*s.* 8*d.* per lb. for new crop for January-April delivery. In the drug-auction one case of fair West Indian distilled was held at 5*s.* per lb.

Oil, Peppermint.—Steady but quiet, American Wayne County offering in tins at 6*s.* 6*d.* spot, and for forward delivery at from 6*s.* 4½*d.* to 6*s.* 6*d.* c.i.f. *Todd's* is obtainable at 8*s.* 3*d.* spot and H. G. H. at 10*s.* 9*d.* Holders of Japanese dementholised (Kobayashi) still ask 4*s.* 9*d.* spot, and 1*d.* less for Suzuki; for arrival 4*s.* 6*d.* c.i.f. is quoted.

Opium is steady, with small spot sales of Persian at from 12*s.* to 13*s.* per lb. as to analysis, and for shipment 12*s.* 3*d.* c.i.f. might possibly buy; but there is nothing doing at the moment. Tokat has changed hands at from 16*s.* to 17*s.* per lb.

A Smyrna correspondent writes on August 29 that the week's sales consisted of 176 cases, of which 171 cases were for the United States, at the equivalent of 12*s.* 9*d.* per lb. for new crop and 14*s.* 4*d.* per lb., c.i.f. European ports, for old crop. The syndicate formed by sellers commenced to operate by compelling buyers to pay former prices since last week's forced decline. The presence of buyers will cause next week's quotations to be animated. The market closed firm. Arrivals amounted to 1,378 cases, against 1,124 cases last year on the same date.

Another Smyrna correspondent also writes on August 29: This has been a busy week. When the market opened some business in new Karahissar, which had been in negotiation last week, was concluded at a reduction, induced by the pecuniary needs of several small holders; but America was obliged to comply with the demands of the large holders in order to obtain 125 cases of old extra Karahissar, and the other qualities were influenced by the rise. The sales amount to 176 cases, comprising 126 cases old extra Karahissar t.q. at the equivalent of 14*s.* 1*d.*, 35 cases new extra Karahissar at 12*s.* 6*d.*, 8 cases new prime ditto at 12*s.* 6*d.*, and 7 cases Adette at 12*s.* 3*d.* per lb., c.i.f. terms. The market closed very firm, with buyers, and the arivals amount to 1,378 cases, against 1,124 cases at the same time last year.

The stock in Smyrna is now about 2,336 cases, against 1,877 cases at the same period last year; and in Constantinople 354 cases, against 213 cases.

Writing on September 5 another Smyrna correspondent states that the week's sales consisted of eight cases new crop, of which six were for export at the equivalent of 12*s.* 9*d.* and 13*s.* 4*d.* per lb. for Karahissar and selected. Holders do not seem anxious to sell and as buyers insist on extra selected quality opium from the new crop, business is at a standstill. The market closes firm. Arrivals of new crop amount to 1,438 cases, against 1,140 cases last year.

Orris.—Reports are current that the prospects for the new crop of Florentine are poor and that prices are likely to advance; but such reports are circulated every season from Italy, yet the higher prices do not come about. Good bold selected Florentine is worth about 45*s.*, and fair sorts 40*s.* per cwt.

Pimento.—Steady. Thirty bags offered and 9 bags sold at 2*d.* for greyish.

Quicksilver is very firm and fairly active at 8*l.* 2*s.* 6*d.* per bottle from the importers, while in second hands business is passing at 8*l.*

Quillaia is a trifle easier on the spot at 29*l.* 15*s.* per ton.

Quince Seed.—No Spanish or Cape appears to be available on the spot. After a long interval a parcel of about 7 cwt. of Russian has arrived in Hamburg, the price of which is about 1*s.* 8*d.* per lb.

Quinine.—Business continues at a standstill so far as speculation is concerned, and there is but a small trade demand. The value of German brands of sulphate from second-hands is unaltered at 7½*d.* to 7¾*d.* A line of 150 cases Java sulphate close at hand has been sold to the United States at 6¾*d.* per oz. At Amsterdam on September 4 the Amsterdam Quinine-works offered 1,417½ kilos. Ed. II. sulphate, of which 141¾ kilos. were sold at 11.50f. per kilo.

Shellac is dull and easier in all positions. On the spot fair free TN orange is quoted 107*s.* per cwt.

Taraxacum.—In small demand at the moment owing to anticipated lower offers of new foreign. It is not anticipated that there will be any special demand from the United States for dandelion-root this autumn. It may be remembered the New York market was particularly active in the early part of 1907, owing to the exploitation of "Kargon," a proprietary medicine which required the addition of fluid extract of dandelion to round off its curative effects. The sales of fluid extract in the United States during those months increased considerably, and the unusual demand left the market bare of the drug, which by this time was worth 30c. Naturally in the winter of 1907, when the trade was warned of a renewed advertising campaign, prices soared again, especially since those with advance information had secured a large portion of the new crop. However the second essay was a failure, scarcely affecting the routine demand for the drug, and it is unlikely that it will be repeated. The New York price for German is 8c. per lb.

London Drug-auctions.

At the auction of first-hand drugs a much better demand prevailed, and values of a few staples improved somewhat. Cape aloes was dearer, and for Zanzibar skins full prices were paid. Areca is easier; buchu is scarce and fully ½*d.* to ¾*d.* per lb. dearer; Sumatra benzoin, good and medium qualities, is also scarce, offerings to-day realising valuations. Cardamoms appreciated 1*d.*; coca-leaves steady; dragon's-blood and gamboge quiet; Jamaica honey not offered; rhubarb slow; grey Jamaica sarsaparilla about 1*d.* per lb. easier on the average, but steady as compared with the closing prices of the auction a fortnight ago. Tinnevelly senna is in demand at full prices to ¼*d.* per lb. higher rates; Madagascar wax was 2*s.* 6*d.* easier, and Jamaica was not offered. The following table gives the total quantity of original packages offered and sold, the asterisk denoting private sales:

	Offered	Sold
Aloes—Cape	86	75
,, Curaçao (bxs)	27	16
,, Zanzibar (cs.)	6	6
Ambergris (tins)	9	0
Anise (Russ.)	7	0
Annatto-seed	8	0
Areca	60	50
Arsenic	4	0
Benzoin—		
Sumatra	55	55
Birdlime	5	0
Buchu	15	9
Camphor—		
Jap. ref.	2	0
Canella alba	7	0
Cannabis indica—		
Bombay	5	0
Cardamoms	202	102
Cascara sagrada	194	10
Cascarilla	20	0
Cashew-nuts	31	31
Coca-leaves	20	12
Cochineal	5	0
Coriander-seed	44	0
Dragon's-blood	28	2
Elemi	20	11
Ergot	9	0
Fennel-seed	20	0
Gamboge	16	0
Gentian	30	0
Gum arabic	6	0
Henbane	1	0
Honey—		
Australian	21	21
Ipecacuanha—		
Matto Grosso	7	0
Jalap	5	0
Kola	28	28
Lime-juice	9	2
Milk-sugar	20	*2
Oil—		
bay	1	0
camphor	13	0
cinnamon (leaf)	14	*2
clove	2	0
lemongrass	6	0
orange	1	0
Olibanum	97	0
Orange-peel	4	4
Papain	4	0
Rhubarb (China)	49	5
Sarsaparilla—		
Grey Jamaica	43	43
Lima	7	7
Seedlac	90	0
Senna—		
Tinn.	202	202
Sticklac	59	0
Tamarinds (W.I.)	27	0
Tonka beans	1	0
Turmeric	59	0
Wax (bees')—		
East African	2	2
East Indian	90	0
Egyptian	121	0
Jamaica	1	0
Madagascar	227	120
Morocco	9	0
Soudan	40	40
Spanish	6	0
West Indian	1	1
Wax (Japan)	20	0

ALOES.—Cape aloes was in good demand, all the offerings being cleared at an advance of from 1*s.* 6*d.* to 2*s.* per cwt. Mossel Bay, on the usual 20 per cent. tares, sold as follows: Fine bright hard firsts, 31*s.* 6*d.*; good bright hard, 30*s.* to 30*s.* 6*d.*; good bright hard, but a little livery, 28*s.*; fair seconds, dullish and soft, 28*s.* to 29*s.*; common to middling, dull, soft, and drossy, 26*s.* to 27*s.* 6*d.*; very soft dull, 25*s.* 6*d.*; common hard, 26*s.* 6*d.*; and ullaged mixed with dirt, 22*s.* per cwt. Fourteen cases Algoa Bay sold on "estimated tares" at 25*s.* for ordinary softish, 26*s.* for fair, and 27*s.* for good. A lot of 27 boxes Curaçao partly sold at 42*s.* per cwt. for darkish livery, 36*s.* for middling dark brown, and 36*s.* for inferior capey; fair liver was bought in at 50*s.* Six cases of Zanzibar in skins sold at 75*s.* for fair dullish hard hepatic, and at 65*s.* for darker and very skinny.

ANNATTO-SEED.—Eight bags good bright Madras seed were limited at 4½*d.* per lb.

ARECA.—Easier; fifty bags of fair, slightly wormy Ceylon realised 15*s.* per cwt.

BENZOIN.—The better and medium qualities are very scarce and wanted, the bulk of the stock consisting of common grades. At auction 55 cases only offered and sold from 8*l.* 2*s.* 6*d.* to 8*l.* 5*s.* per cwt. for good Sumatra seconds well and evenly packed with small to bold almonds, and for good fair almondy not quite so well packed 7*l.* 15*s.* per cwt. was paid.

BUCHU being scarce sold on advance of fully ½*d.* to ¾*d.* per lb.; for fine round green 10½*d.* was paid, and 10*d.* for good green. Fair greenish round sold at 9½*d.*, and slightly yellowish at 9*d.* A bale of stalky green longs realised 6*d.*, and for yellowish ovals 5*d.* was wanted.

CARDAMOMS were in good demand at an irregular advance of from 1*d.* to 2*d.* per lb., the following prices being paid: Indian from Calicut, bold long unbleached, 2*s.* 3*d.*; small long unbleached, 1*s.* 6*d.*; bold medium sizes were afterwards sold privately. Mangalore character from Calicut sold at 2*s.* 9*d.* for good bold round palish, at 2*s.* 6*d.* for bold medium ditto, at 1*s.* 11*d.* for small and medium round, and at 1*s.* 6*d.* for small round. Ceylon-Mysore, extra bold smooth pale, 2*s.* 5*d.* to 2*s.* 6*d.*; good bold palish to pale, 2*s.* 1*d.* to 2*s.* 3*d.*; bold and medium palish to pale, 1*s.* 9*d.* to 1*s.* 11*d.*; small and medium palish to pale, 1*s.* 6*d.* to 1*s.* 8*d.*; small pale, 1*s.* 6*d.*; brown and split, 1*s.* 4*d.* to 1*s.* 5*d.* Splits, bold pale, 1*s.* 6*d.*; small splits, 1*s.* 5*d.* Ordinary to good seed, 1*s.* 8*d.* Privately a good business has been done in decorticated seed at 1*s.* 8*d.*, but most holders ask 1*s.* 9*d.* per lb.

CASCARA SAGRADA.—A parcel of 194 bags fair bright quilly, three years old, was offered in lots of ten bags, of which two lots sold, at 40*s.* per cwt., gross for net, no discount, the remainder being bought in. The above auction price by no means indicates the market privately, as a fair amount of business has been done at 42*s.* 6*d.* spot for last year's bark, and the market has a rising tendency. No business has transpired for shipment. Business is said to have been done in New York at the equivalent of 45*s.* 6*d.* c.i.f. It is also pointed out that little bark has been picked this year, one estimate putting the stock on the Pacific Coast at about 250 to 300 tons.

CASHEW NUTS.—Twenty-seven packages of low wormy (unfit for human food) sold at 2*s.* 6*d.* per cwt., and for four cases husky and wormy 5*s.* was paid, all without reserve.

COCA LEAVES steady. Twelve cases of Ceylon-Huanuco sold at 6½*d.* per lb. for fair bright brownish-green and at 5¼*d.* for middling bronzy. Eight bales Java were bought in at 7*d.* per lb. for dullish thin green Truxillo character.

DRAGON'S BLOOD.—Quiet. Two cases of common damp bricky slabs and lump sold at 6*l.* 5*s.* per cwt. Good bright reboiled lump was held at 11*l.* 10*s.* per cwt.

ELEMI steady. Of twenty cases offered ten sold at 45*s.* per cwt. for fair pale Manila, a case of good realising 50*s.*

ERGOT.—Four bags fair but small sound new crop Russian were held at 1*s.* 1*d.* per lb., and five bags old slightly wormy were bought in at 1*s.* 3*d.*

GENTIAN.—Thirty bags fair dried red root were held at 21*s.* per cwt.

HENBANE.—A bale of German leaves was held at 45*s.* per cwt., gross for net.

HONEY.—No Jamaica offered; twenty-one cases of Australian sold at from 16*s.* 6*d.* to 18*s.* 6*d.* per cwt. for common dark liquid to dull set. Privately, Jamaica is scarce, all the available parcels having been cleared at higher rates. The sales in Liverpool include fine new liquid Californian at up to 51*s.* per cwt., low pile Chilian at 29*s.*, and pile 1 at 28*s.* per cent.

IPECACUANHA.—Dull. Although only seven bales Matto Grosso were offered, there were no bids, and the lot was bought in at 5*s.* 3*d.* per lb., the limits being from 5*s.* to 5*s.* 2*d.* as in quality.

JALAP.—For five bags small to bold fair (7 per cent. resin) 10*d.* was wanted.

KOLA.—A barrel of green Ceylon, but part mouldy, sold at 1*d.* per lb., and for 27 bags Ceylon fair, rather dark and occasionally defective, 1¾*d.* per lb. was paid.

LIME-JUICE.—Two casks of low brown West Indian, with much suspended vegetable matter, sold at 2*d.* per gal. without reserve. The arrivals include 116 packages concentrated and 299 packages raw lime-juice from Dominica.

MILK-SUGAR.—A parcel of 20 cases Italian powdered, of which two had been sold privately, was bought in at 45*s.*

OIL, CAMPHOR.—Thirteen cases of heavy brown camphor oil (s.g. 1.038) were bought in at a nominal figure; a bid of 51*s.* per cwt. is to be submitted.

OIL, CINNAMON.—Fourteen cases Ceylon leaf were offered, of which part had been sold privately; 2⅝*d.* per oz. was the price asked.

ORANGE-PEEL.—Four cases thin palish strip sold without reserve at from 4*d.* to 4¼*d.* per lb.

RHUBARB.—Quiet; five cases medium round horny pale-coated High-dried, with three-fourths fair pinky fracture and one-fourth dark, sold at 7½*d.* per lb. Bold round orange-coated Shensi, a little rough, with three-fourths pinky fracture, was held at 2*s.* 3*d.*, and for medium round part trimming-root 2*s.* 4*d.* was wanted. No Canton or flat High-dried was offered; the latter is very scarce at the moment.

SARSAPARILLA.—Grey Jamaica, of which 43 bales offered, all sold at 1*d.* per lb. easier rates. Fair grey with occasionally a little coarse sold at 1*s.* 6*d.*; fair, but part coarse, 1*s.* 5*d.*; and ordinary coarse, 1*s.* 4*d.* per lb. Lima-Jamaica was also easier as compared with the previous sales, 7 bales realising 1*s.* 3*d.* to 1*s.* 4*d.* for grease-damaged to fair rolls. No native was offered.

SENNA.—The bulk of offerings of Tinnevelly consisted of nice clean quality, such as has not been seen for several years, and with more orders about than could be filled, prices on a keen demand advanced fully ¼*d.* to ½*d.* per lb. The following prices were paid: good bold greenish leaf, 4*d.* to 5*d.*; fair medium and bold greenish, 3*d.* to 3¾*d.*; small medium greenish, 2¾*d.*; low small yellow to middling, 2*d.* to 2½*d.* per lb.; dark to fair pods, 2½*d.* to 2¾*d.*

TONKA BEANS.—A case of fine Para, all that offered, was bought in at 2*s.* 6*d.*

WAX, BEES.—A pile of 227 packages Madagascar wax was offered, of which about half sold at 6*l.* 10*s.* per cwt. for fair brown block, being 2*s.* 6*d.* easier. Forty packages Soudan sold at 6*l.* for ordinary yellow half-dark and partly drossy; two cases fair, slightly drossy East African realised 6*l.* 12*s.* 6*d.*; 121 bags fair, slightly drossy Egyptian were bought in at 6*l.* 10*s.*; fair white Calcutta was retired at 8*l.*; bleached Spanish at 6*l.* 15*s.*, and inferior Morocco at 5*l.* 10*s.*; 64 cases unbleached Calcutta were bought in at 6*l.* 15*s.*; a bid of 6*l.* would probably have been accepted for the pile. A case of fair pale yellow and brown to grey Antigua saucers sold at 7*l.* 5*s.* per cwt. In Liverpool the sales include 16 bags Chilian in auction at from 7*l.* 12*s.* 6*d.* to 8*l.* 5*s.* per cwt.

WAX, VEGETABLE.—Japan was offered at 52*s.* 6*d.* per cwt., at which private sales have been made.

THE exports of tartar from Tarragona during 1907 amounted to 507 tons, against 280 tons in 1906.

FRENCH CHALK.—The exports of this mineral from Malaga, both crude and powdered, is steadily increasing, and the mines near Malaga, which are being worked by a British firm, find a ready market for their product.

Correspondence

TO CORRESPONDENTS.—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. Publication of letters does not imply our agreement with the arguments or approval of the statements therein. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects presumably of interest to our readers generally. Letters received after the early posts on Wednesday cannot as a rule be dealt with in the current week's issue.

BUSINESS INFORMATION.—We have very full records of the makers or agents for articles and products connected with the chemical and drug trades, and supply information respecting them by post to inquirers. Inquiries regarding any articles which cannot be traced in this manner are inserted under "Information Wanted."

Acidum Sulphurosum, B.P.

Sir,—I recently received the following prescription to dispense :

Acid. sulphuros. B.P.	...	...	...	℥j.
Aq. ad	...	...	...	℥iv.

A teaspoonful in hot water as directed.

This was from a Harley Street man, who assured the patient that it was useless trying to get it dispensed in the country; he must go to X—, Oxford Street. The patient was a friend of mine who had the sense to know that a country pharmacist is not necessarily either a fool or a knave. But that there was some foundation for the doctor's instructions was illustrated when I proceeded to obtain samples in a retail way and found them to be from one-tenth to one-twentieth the B.P. strength. An unopened bottle from an excellent house, which had been in stock two years, gave the latter figure.

I prepared a quantity of the acid by the B.P. 1885 process, and it was four hours before I could bring it up to strength. After my trouble I received a shilling for the mixture, and had the satisfaction of knowing that the patient would take it in hot water, according to the doctor's instructions, and thus undo all my labour.

The problem of strength in unstable preparations prescribed, say, once a year is a difficult one to solve. Spirit of nitre has long been a trouble, and fluid magnesia has lately been the rage. In all these cases the results will depend on the quantity used and the consequent freshness. There are three courses open to retailers : (1) Refusal to stock at all; (2) keeping a bottle unopened, tied up in the dark, ready for any suspicious character; (3) preparation or standardisation on the spot. The first is applicable in better-class districts, as a proprietary article is available in some cases. The second is the one sometimes adopted, but is immoral, though the conscience may be comforted by the thought that "the law is a hass." The third is the most scientific, but is unreasonable owing to the remuneration received. If one had many prescriptions like the one quoted above, one would soon join the (unpaid) scientific staff of a workhouse.

It seems to me that alternative preparations that can be extemporaneously prepared from standard materials should be officially allowed. Sulphurous acid can be prepared from bisulphite and hydrochloric acid, an alkaline hypochlorite by adding hydrate to liq. chlori co. U.S.P., and in other cases other materials could be used. Where the preparation is neither stable nor easily prepared it should be deleted from the Pharmacopœia altogether. It would certainly be difficult to draw the line, many careless chemists, for instance, regarding liq. calcis and lin. camph. as unstable, whereas only a little care is needed in stocking them. Yours truly,

Ryde, I.W. E. W. Pollard.

The Chemists' Title.

Sir,—In reply to "M.P.S.'s" statement (*C. & D.*, August 29, p. 366) that "each of the Presidents at any rate possessed the legal qualification," I accept it without question, but I must add that in my opinion too many of them thought so little of that same qualification that they hid their light under other titles and names of chemists long dead. I do not question their right to do so, even if I doubt the advisability, but I do say you cannot expect such men to be particularly eager publicly to establish the beauty and desirability of the personal qualification, seeing that they themselves seek to obscure their personal connection with the businesses they own. They were personally examined under their own names as to their fitness to serve the public, and the qualification is considered so personal that their names and addresses only are registered, and not their places of business. Having passed as efficient, they forthwith hide their identity under an alias, and the official register of chemists gives no information as to the sphere of their activities, and is no safeguard to the public. I can quite imagine a future news paragraph in the *C. & D.* on the lines we are so familiar with anent company shops and oil-stores—viz., "The poison was sold by Messrs. ——, but the name does not appear on the register of chemists and druggists"—applying to one of the elect. Ichabod! would be the only word that could adequately express our feelings. The personal qualification as displayed in our business is, I think, dichotomous, and the branch that represents the care, skill, and precautionary measures exerted for the safety of the public, for which one gets nothing, is too often confounded with the care, skill, and proprietary recipes for the benefit of one's pocket which bring in 100 per cent. For our arguments to carry weight with the Legislature we must base them on the former, and men who run their businesses under pseudonyms are not the men to push the arguments effectively, as the legislator naturally retorts, "You say you are personally qualified to look after the safety of the public, but you do it in someone else's name, with a view to the 100 per cent. Bleat about the safety of the public, or go for the 100 per cent., but for goodness sake do not ask for the advantages of both but accept the drawbacks of neither." The argument that because the signboard under which a certain personality did business is bought and sold indicates the monetary value of the personal qualification, only needs thinking about to show its falsity. Surely a man who elects to be known by the name of his predecessor did not buy that predecessor's personal qualification, but only the signboard by which he was indicated to the public. As "M.P.S." says, "there is no justification for a trader personally unqualified for flaunting a title he never possessed," but neither is there for traders personally qualified for flaunting a name they never possessed, to the exclusion of their own. That titles are bought and sold shows the value of personal qualification to the present owner—a live dog should be better than a dead lion. The very reason for our existence as a corporate body is the safety of the public, and not the lining of our private purses, which our policy by inference seems to intend to prove. Before asking for further protection, it is quite as well to demonstrate to the public our own belief in the virtue of the personal qualification by displaying a certain amount of trust in our own personalities, and not that of predecessors who, however careful and skilful in their day, are powerless to protect the public in 1908 from mistakes or remissness in carrying out new poison regulations. It may strengthen my argument when I say I own an old-established business, but the founder's name, although duly respected and recognised, is not the one by which I am known to the public. Cutting the temptation to lean on another's reputation, I have decided, uninfluenced by the classic doings of solicitors and others, that it is my own personal qualification by which I must stand or fall. It may have been over bold or very foolish, but I am content. Yours truly,

Ludlow. W. J. Brown.

Sir,—May I make a few remarks on the Poisons and Pharmacy Bill, which appears to be a piece of legislation made to suit the peculiar interests of company chemists? I will first of all ask the question, What is a company? Is it not an association of individuals? How, therefore, can it be right for it to do that which an individual may not do? If companies may appropriate the professional title

of "chemists," why stop there? Why not appropriate the titles "doctors," "barristers," or "solicitors"? The present proposal comes to this—that while Tom, Jones, and Robinson (not possessing chemists' qualifications) may not set up three chemists' shops in their respective names, they may by entering into limited partnership, under the title of, say, Tom, Jones & Co., open 10,000 shops, calling each shop "Tom, Jones & Co., cash chemists." To do so they have, according to the present Bill, only to hire some down-at-heel member of the profession—ruined by their own competition—at a small fee (just sufficient to keep him from starvation), call him a "director," and the thing is done: the 10,000 "cash chemists'" shops may be opened forthwith. If this is right for limited companies, then surely any unlimited partnership or individual must be allowed, in fairness, to do the same. And if they are, where do qualified chemists come in? Will young men in that case be found to spend money and time upon special education, subjecting themselves to stringent examination, etc., if unqualified persons may compete with them on equal terms? Will anyone answer this question or refute the logic of my argument?

Faithfully yours,
F. C. Heron.

Broad Street House, New Broad Street, E.C.

Optical Observations.

Sir,—I wish to tender my best thanks to "Chemist-Optician" for his replies to my queries. The paragraph on prices has given me a great deal of food for thought. I have frequently been surprised at the way my stuff tarnished and the amount of cleaning it required, even when exhibited in a closed case; two or three of the astig. frames have turned quite black, yet I have been charged 42*s.* a dozen for them. It is evident there is a better market than where I have bought. I shall look for it when stock requires renewals. This is the way one is played with when anything new is taken on, and prices and requirements unknown. I have noted the advice on tinted lenses in trial case for guidance when purchasing new one, and on frame measurements. I shall keep to my own method and so order when required—at least, until I find the way the next wholesaler works to. I take it, working sensibly and using one's brains will get over difficulties and eliminate mistakes.

Yours faithfully,
C.-O. (42/5.)

The late Mr. Baynes.

Sir,—I see that in your notice of the death of the late James Baynes, F.I.C., late public analyst for Hull (*C. & D.*, August 15, p. 260), you do not mention the fact that he was the son of James Baynes, who was in his day the leading pharmaceutical chemist of Hull, and at one time a member of the Pharmaceutical Council, where he rendered good service. He was a fine old type of the chemist of the early 'seventies, and was highly esteemed in Hull, both for his scientific attainments and his natural courtesy.

Yours faithfully,
Wm. Bousfield.

[Mr. James Baynes died in 1886, aged seventy-six. He served on the Council from 1872 to 1876.]

Looking Backward.

Sir,—Some while ago one of your readers gave his apprenticeship experience in a good house, and I wondered how many were as fortunate as he. My own experience was of quite a different nature. We were three apprentices, and we had to learn of each other. I do not remember my governor showing me a single thing; he spent most of his time in the house or chatting to his cronies. It was when I went up to study for my Minor that I first saw a percolator or, in fact, any of the usual apparatus for our work; yet we made quite a lot of galenicals in our way. For instance, the senior apprentice would take a 4-lb. lozenge-bottle and stick in so much fol. hyos., bellad., or what not (not reduced), with the full amount of spirit. This he would allow to stand until required, shaking if he thought of it. This would be filtered into the stock-bottle as it was necessary until no more would run; then he would poke out the mare (the whole leaves) into a sausage-machine-like press, filter, and *voilà tout*. In lieu of any form of heating-apparatus we used the kitchen stove, where one apprentice, I remember, would spend hours over an ointment and a pocket novel. The governor surprised him one day while making furniture-polish with turpentine. To show his devotion to duty he struck a match to see if his wax was melted through a vapour of turps. For a long time after that he wore a cap to hide his bald head, and was minus eye brows and lashes. The governor himself essayed one day to make some pil. ferri redact. et phosphori, etc., and after two firework displays handed it over to me to experiment with. With the aid of "Whitla's" I made two dozen boluses. I have made some since in the West-end, but they were somewhat different. As for slopping in mixtures, well, we had a good deal of experience, but I never knew until after my apprentice-days were over that it was customary to strain a mixture and rub down insolubles, or, as a matter of fact, to dissolve solubles entirely before dispensing.

Well, Sir, I could write quite a lot of my own experiences, but I have just had two such apprentices turned over to me, and what I want to remark is this: that the chemist who takes an apprentice, be it for a premium (which in my case was 50*l.*) or not, if he does not teach him his business it is a matter for his serious reflection. The budding junior leaves him full of self-confidence, only to find his three years have been two-thirds wasted. He believes himself fitted to manage a first-rate dispensary, and rather than he will be humbugged (he thinks it is humbug) by his new governors he will go to a stores, where his scientific skill is not called for. One of your articles not long ago said the better-class shops would not be bothered with apprentices. Then it is no wonder that the percentage of Minor passes is so low; and so long as apprenticeships such as mine and the two I have mentioned go on, so long will the stores flourish, the Minor passes be low, and apprentices be drafted on to other men to pay and teach.

To whom it may concern: If your apprentice robs your till, you express yourself in such terms as "dishonest." The chemist who takes an apprentice and allows him to potter his time away is quite as guilty, only in another way—one does the trick direct, the other by subterfuge.

One of Mr. Squeers'. (42/33.)

Separating Wool from Cotton.—*J. H.* (42/32), referring to the replies given in the *C. & D.* to above inquiry (pp. 336 and 404), writes: The reply given last week is correct so far as it goes. Potash acts more satisfactorily than soda. Generally, though, the want is to remove cotton from mixed goods and retain the wool. This is effected by "carbonising" on the large scale, but the same process is equally effective for assaying. The fabric is immersed in 2 to 5 per cent. solution of sulphuric acid and dried. The acid left on evaporation chars the cotton, but has little effect on the wool. [The last-named process, using hydrochloric acid, was explained in the *C. & D.*, May 23, p. 816.]

Likes the C. & D.—Mr. W. A. Fullalove, Cradock, Cape Colony (40/63), writes: Just a line of 'gratulation on the super-excellent Summer Issue just to hand. We Knights of the Pill-roller down under are always glad when mail day and the familiar Pink 'Un arrive, but this is surely the finest ball fired from Cannon Street in all my Karroo career.

Dispensing Notes.

Iron in Mag. Carb.

Sir,—I am sending you the following recipe in the hope that it may be of interest:

Tr. nuc. vomic.	...	...	... 3ij.
Magnes. carb.	...	...	... 3ij.
Sodii bicarb.	...	...	... 3ij.
Inf. calumbæ ad	...	...	... 3vj.

M.

This is one of those simple-looking prescriptions which often cause the dispenser a good deal of trouble. It turned a dirty green within twenty-four hours of being compounded, and seemed to be worse when mucilag. tragac. was used to suspend the mag. carb. pond. On investigation I discovered ferric iron present as an impurity in the magnes. carb., and I put the green colour down as being due to the reducing action of the alkaloids, etc., in the tr. nuc. vom. on this ferric iron. The mucilag. trag. keeping this lower salt of iron in suspension would account for it being worse when mucilage was used. Perhaps your opinion on this mixture and what actually takes place would interest your readers (unless it be

a better-known peculiarity than I am aware of). All the samples of magnes. carb. pond. and lev. that I have tested contain iron. Yours faithfully,

A. McEwan.

Legal Queries.

For concise statements respecting various Acts which affect directly or indirectly the Chemical and Drug Trades, see the "C. & D. Diary," 1908, p. 456; Stamped Medicine Law, p. 435; Pharmacy and Poisons Law, p. 448; and Patents Law, p. 442.

Ferrum (41/12).—"Dispensary" is not a protected title under any Pharmacy or Medical Act.

Junior (42/61).—You are entitled to either a month's notice or a month's salary, that being the custom of the drug-trade.

Unqualified Dentist (38/35).—The fact that the private dental society threatens to strike your name off its register should not trouble you in the slightest.

W. B. C. (36/74).—The making of fireworks on unlicensed premises is illegal. Chemists' premises would, moreover, not be licensed. The mixture of potassium chlorate, strontia, and shellac is an explosive such as is covered by the Explosives Act.

Doctor-Chemist (41/18).—Unprofessional Dentist.—You should note that the words "visiting this town" seem to exclude you. If he is a member of the British Dental Association you might communicate with the Secretary of that Association. Your medical degree entitles you to practise dentistry.

Etranger (41/39).—The Patents Act, 1907, renders it compulsory upon foreign holders of British patents to work them adequately within the United Kingdom. The Patents Act has now nothing to do with the Trade-marks Act, and no alteration has been made in regard to the protection afforded to foreign proprietors of registered trade-marks.

Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular date, nor can we repeat information given during the past twelve months. A preliminary condition for reporting on samples submitted is that all particulars as to source and uses are given to us.

Colour (29/50).—Confectionery-colouring.—The preparation sent is caramel flavoured with ess. vanill. or vanillin dissolved in alcohol. It contains no aniline dye.

Tragacanth (28/23).—Living near Cemeteries.—The question you ask as to the dangers to health incurred by living near a cemetery is not easily answered, especially as you ask what is the general opinion of modern scientists on the point. If one reads the literature dealing with cremation one finds constant references to the danger to the living incurred by the process of earth burial of dead bodies. It is generally asserted that the earth in which the body is buried purifies the escaping gases of decomposition and prevents danger of polluting the air and surrounding water-collecting area. The advocates of cremation have, however, collected evidence that this purification by earth does not take place to anything like the degree that is imagined. On this and similar grounds we should think that the "general opinion of modern scientists" would be against living near a cemetery.

J. R. B. (29/56).—A. Grease-remover for motorists' use could be made from soft soap diluted with water to make it liquid. This at least could be used as a good basis for such a preparation, but probably the slippery feeling of the liquid would be an objection.

Bleach (33/30).—Tripe is bleached by soaking in a cream of caustic lime and water, and afterwards washing off the lime.

J. N. H. (Cairo) (164/22).—The membership of the Pharmaceutical Society of Great Britain is only open to those who have passed the qualifying examination of that body. For particulars of these examinations refer to the Educational Number of The Chemist and Druggist, which was published on August 15.

Nemo (37/42).—Shampoo-powder for killing nits in children's heads.—The addition of a small quantity of extract of quassia suggests itself to us as the simplest non-poisonous addition to the saponaceous powder used for shampooing-purposes. The extract should be rubbed down with the powder until a dry mixture is obtained, and this diluted extract added in sufficient quantity to the bulk powder

J. A. R. (39/20).—The paregoric in the cough-mixture could be replaced by tinct. camph. co. sine opio if it is desired to retain the flavour of the mixture and at the same time produce a preparation quite free from scheduled poison.

Curious (23/35).—Ancient Pharmacy-pot.—We assume you have followed at least in part the numerous articles that have been given in The Chemist and Druggist on pharmacy-pots. The tracing of the design on the pots you have, with your description, indicates that the pots are of English manufacture of the period of late eighteenth century. Many chemists with artistic leanings collect specimens of these interesting relics of old pharmacy, and you will have no difficulty in disposing of the pots through an advertisement in the Coloured Supplement.

S. C. R. (16/10).—(1) Vegetable Carmine is a name given to carthamin, the red colouring-matter of *Carthamus tinctorius* or safflower. It is prepared as follows:

Stir with solution of sodium carbonate (16 lb. of soda to 50 gals. of water and 100 lb. of safflower), let stand till clear, decant the liquid, and press the residue. Add to the solution obtained as described 16 lb. of clear lemon-juice and a quantity of linen or cotton rags. All the colouring matter adheres to the rags. These are removed, pressed, and placed in a solution of sodium carbonate (10 lb. of soda to 40 gals. of water). The rags are removed from the solution, which now contains all the pigment. This is then precipitated with just sufficient lemon-juice, filtered, and the precipitate dried on paper or porcelain plates.

(2) The B.P. formula for tinctura curcumæ can be employed as a culinary colouring solution.

X. Y. Z. (34/16).—Sunburn-remedies are directed to soothing the irritation and allaying the inflammation of the skin, which shows itself by the redness. On this account ammonium chloride with some spirit is often very successful, but too much spirit produces a disagreeable drying effect, which is quite as unpleasant as the original complaint. A good lotion is here given, but it may be desirable from considerations of cost to lessen the quantity of cocaine:

Ammon. chlorid.	ʒj.
Cocain. hydrochlor.	gr. xij.
Glycerini	ʒiij.
Spt. rectificat.	ʒiij.
Aq. flor. aurant.	ʒij.
Aq. rosæ ad	ʒvj.

M.

Negative (41/62).—You cannot do better than consult "Pharmaceutical Formulas" for photographic recipes. A special chapter is devoted in that work to modern photographic formulæ.

The Week's Poisonings.

NINE deaths from poisoning have occurred during the week, including two by misadventure. Four poisons were unscheduled, and three also in the second part of the schedule, one case of suicide being with a poison in the first part of the schedule, and in another instance the poison was not stated.—Jane Armstead (42), the wife of a Notting Hill labourer, committed suicide by taking spirit of salt.—A child named Ethel A. M. Chantler died at Ramsey from phosphorus poisoning caused by sucking lucifer matches.—Cunford Webb, a Surbiton barmaid, who had been depressed lately on account of her postponed wedding, was taken suddenly ill and died later in the day; medical evidence showed that death was due to poisoning, and the inquest was adjourned for investigations.—At the inquest on David Grainger, a Belfast child, who died through taking ammonia administered for lime-water by his grandmother, the Coroner recommended that chemists should put a "poison" label on bottles containing liquid ammonia.—Thomas Powell (23), fitter, Brecon, drank carbolic acid in a fit of temper and died shortly afterwards.—According to his wife's statement, Herbert Bullock, a retired army officer, as also herself, had taken laudanum as they intended to die together. The inquest was adjourned for her attendance on leaving hospital.—Florrie Witehard (18), a Newport domestic servant, committed suicide by taking carbolic acid, as she had been reproved for staying out late.—Alexander Main, a Liverpool veterinary surgeon, was found on his mother's doorstep at Onchan, Isle of Man, suffering from strychnine poisoning, and died shortly afterwards. A verdict of suicide was returned.—The usual verdict was returned on the body of John Harrison (69), street-hawker, West Ham, who died a few days after his removal to the hospital from shock following ammonia poisoning.